INDEX TO AUTHORS

A

Alles, Gordon A., and **Hawes, Roland C.** Cholinesterases in the blood of man, 375

Alpert, Louis K. See *Farr and Alpert*, xxx

Anderson, R. J., Creighton, M. M., and **Peck, Robert L.** The chemistry of the lipids of tubercle bacilli. LX. Concerning the firmly bound lipids of the avian tubercle bacillus, 675

Anderson, W. A. D. See *Morrison, Williams, and Anderson*, lxx

Andrews, James C., and **Webb, Bailey D.** Studies on the optical activity of quinine and its salts, iii

—. See *Kyker, Webb, and Andrews*, lvii

Ansbacher, S. Vitamin K, iii

Armstrong, W. D. See *von Hevesy and Armstrong*, xliv

Arnow, L. Earle, and **Opsahl, Jeanette C.** Partial racemization of glutamic acid in boiling hydrochloric acid solutions, 765

Artom, Camillo, and **Freeman, John A.** Individual phospholipids in plasma of rabbits after a fatty meal, iv

Astrup, Tage, and **Darling, Sven.** Preparation of thrombin, 761

Austoni, Mario E., and **Greenberg, David M.** Studies in iron metabolism with the aid of its artificial radioactive isotope, iv

B

Babcock, Sidney H., Jr., and **Jukes, Thomas H.** Some observations on pantothenic acid (chick antidermatitis factor), v

Bachman, Carl. See *Gurin, Bachman, and Wilson*, 467, 477

Barnes, Richard H., Miller, Elmer S., and **Burr, George O.** The effect of adrenalectomy on the deposition in the liver of spectroscopically active fatty acids, v

Barron, E. S. Guzman. Studies on biological oxidations. XIII. The oxidation-reduction potentials of *Spirographis* hemin and its hemochromogens, 51

Bauer, Walter. See *Robertson, Ropes, and Bauer*, 261

Baumann, C. A., and **Stare, F. J.** The effect of malonate on tissue respiration, 183

—. See *Stare and Baumann*, 453, xcvii

Baumann, Emil J., and **Metzger, Nannette.** The colorimetric estimation and fractionation of androgens in urine, vi

Beach, Eliot F., Teague, D. Maxwell, and **Macy, Icie G.** The creatine and creatinine excretion of children during different periods of growth, vii

Beard, Howard H. A comparison of the effect of parenteral injection or ingestion of sarcosine *versus* glycine, with and without

urea, upon creatinine-creatine excretion in the rat and man, vii
Beard, Howard H. Effect of cortin, supracorsin, an adrenal hydrolysate, with and without the *d*-amino acid oxidase of pig kidney, upon the appearance, growth, and regression of the Walker sarcoma in rats, viii
— and **Espenan, Julia K.** The synthesis of glycocyamine and creatine from amino acids, urea, and cyanamide, ix
—, —, **Koven, A. Link,** and **Pizzolato, Philip.** Further observations upon the biological relationship between creatine and creatinine in relation to water, salt, and phosphate metabolism, x
— and **Jacob, Ernest J.** Creatine-creatinine metabolism and the hormones. III. Effect of parenteral injection of creatine and creatinine with the sex hormones upon creatine-creatinine excretion in normal animals, x
— and —. IV. Effect of parenteral injection of the sex hormones, with and without creatinine, upon creatine-creatinine excretion in the ninety day castrate rat, xi
—. See *Koven, Pizzolato, and Beard,* lvi
Berg, Clarence P. See *Borchers and Berg,* xv
Berger, Julius, and **Johnson, Marvin J.** The activation of dipeptidases, 639
— and —. The occurrence of leucylpeptidase, 157
Bergmann, Max. See *Fruton and Bergmann,* 153
—. See *Fruton, Irving, and Bergmann,* 703
Bernhard, Karl, and **Schoenheimer, Rudolf.** The inertia of highly unsaturated fatty acids in the animal, investigated with deuterium, 707
— and —. The rate of formation of stearic and palmitic acids in normal mice, 713
Bernheim, Frederick. The action of fatty acids on the choline oxidase of rat liver, 291
—. The action of papain and trypsin on certain dehydrogenases, 141
—. Note on the action of copper and phenylhydrazine on certain dehydrogenases, 485
Bernheim, Mary L. C. The effect of titanium on sulfur metabolism, xi
Binkley, S. B., McKee, R. W., Thayer, Sidney A., and **Doisy, Edward A.** The constitution of vitamin K_2, 721
—, —, —, and —. Structure of vitamin K_2, xii
Bischoff, Fritz. Chemical studies on the pituitary "antagonist," 621
—, **Long, M. Louisa,** and **Rupp, J. Jerome.** Influence of induced hibernation on the growth behavior of mouse neoplasms, xiii
Black, Simon. See *Oleson and Black,* lxxiii
Blalock, Alfred. See *Mason, Blalock, and Robinson,* lxiii
Blatherwick, N. R., Larson, Hardy W., and **Sawyer, Susan D.** Metabolism of *d*-mannoheptulose. Excretion of the sugar after eating avocado, 643
Bloch, Konrad, and **Schoenheimer, Rudolf.** The biological formation of creatine, 633
Block, Richard J. Basic amino acid content of human serum proteins. The influence of the ingestion of

arginine on the composition of the serum proteins, 71

Block, Richard J. The estimation of histidine, 67

—, **Bolling, Diana,** and **Webb, Merrill.** The microestimation of alanine and threonine, xiv

Block, Walter D. See *Murrill, Block, and Newburgh,* 521

Bodansky, Meyer, and **Duff, Virginia B.** Influence of parathyroid deficiency on reproductive success in the albino rat, xiv

—. See *Levine and Bodansky,* 193

Boelter, Muriel D. D. See *Greenberg, Boelter, and Knopf,* xxxviii

Bolling, Diana. See *Block, Bolling, and Webb,* xiv

Bollman, Jesse L. See *Flock and Bollman,* xxxii

Borchers, Raymond, and **Berg, Clarence P.** Nutritive value of zein hydrolysates, xv

Borsook, Henry. The oxidation-reduction potential of coenzyme I, 629

— and **Dubnoff, Jacob W.** Glycocyamine and methionine as precursors of creatine in animal tissues, xv

Brand, Erwin, and **Cahill, George F.** Canine cystinuria. VI, xvi

—, —, and **Kassell, Beatrice.** Canine cystinuria. V. Family history of two cystinuric Irish terriers and cystine determinations in dog urine, 431

— and **Kassell, Beatrice.** The determination of reducing groups with porphyrindin, with special reference to egg albumin, 437

Brower, Nathaniel, and **Tashiro, Shiro.** The effect of thiamine on pancreatic lipase and spinal cord, xvii

Brown, Raymond A. See *Emmett, Peacock, and Brown,* xxix

Bueding, Ernest, and **Wortis, Herman.** The stabilization and determination of blood pyruvate, xviii

— and —. The stabilization and determination of pyruvic acid in the blood, 585

Bull, Henry B. Viscosity of solutions of denatured and of native egg albumin, 39

Burk, Norval F. Osmotic pressure, molecular weight, and dissociation of *Limulus* hemocyanin, 511

Burr, George O. See *Barnes, Miller, and Burr,* v

Butts, Joseph S. See *Deuel, Hallman, Greeley, Butts, and Halliday,* 173

C

Cahill, George F. See *Brand and Cahill,* xvi

—. See *Brand, Cahill, and Kassell,* 431

Calvin, D. Bailey. See *Hendrix, Calvin, and Greenberg,* xlii

Carne, Herbert O. See *MacKay, Carne, and Wick,* 59

Carter, Herbert E., Handler, Philip, and **Stevens, Carl M.** Acylation of amino acids in pyridine, xviii

— and **Melville, Donald B.** Synthesis and determination of the lipotropic activity of the betaine hydrochlorides of *dl*-serine, *dl*-threonine, and *dl*-allothreonine, 109

— and **Stevens, Carl M.** Azlactones. II. Azlactone formation in glacial and in aqueous acetic acid and preparation of benzoyl-α-aminocrotonic acid azlactone II, 117

Cawley, John D. See *Gray, Morgareidge, and Cawley,* xxxvii
Chaffee, Eleanor. See *Meyer and Chaffee,* 83
Chaikoff, I. L. See *Entenman, Lorenz, and Chaikoff,* 231
—. See *Jones, Chaikoff, and Lawrence,* 319
—. See *Perlman, Stillman, and Chaikoff,* 651
Chanutin, Alfred, Ludewig, Stephan, and **Masket, A. V.** The state of calcium and magnesium in blood serum, xix
Chow, Bacon F. See *Greep, van Dyke, and Chow,* 289
Christensen, Bert E. See *West, Christensen, and Rinehart,* cvii
Christensen, Kermit. A microscopic study of the effects of choline deficiency in young rats, xx
Cohen, Philip P. Transamination in liver and kidney, xx
Cole, Versa V., and **Harned, Ben K.** The effects of strontium and calcium on the uterus, xxi
Colowick, Sidney P., Welch, Mary S., and **Cori, Carl F.** Glucose oxidation and phosphorylation, 641
—, —, and —. Phosphorylation of glucose in kidney extract, 359, xxii
Cori, Carl F. See *Colowick, Welch, and Cori,* 359, 641, xxii
Crandall, Lathan A., Jr. A method for acetone bodies in blood, applicable to the determination of small amounts of mercury, 539
Creighton, M. M. See *Anderson, Creighton, and Peck,* 675
Crews, L. T., Sheppard, Fay, Sudduth, H. C., and **Everett, Mark R.** Preparation of keto-l-uronic acids and their relations to carbohydrate oxidation, xxiii

D

Danielson, I. S. See *Sheppard, Danielson, and Everett,* lxxxviii
Darby, William J., and **Day, Paul L.** Blood sugar levels in rats receiving the cataractogenic sugars galactose and xylose, 503
Darling, Sven. See *Astrup and Darling,* 761
Darrow, Daniel C., Yannet, Herman, and **Miller, Herbert C.** Factors controlling muscle water and electrolyte, xxiv
Day, Paul L. See *Darby and Day,* 503
Dettwiler, Herman. See *Schmidt and Dettwiler,* lxxxv
Deuel, Harry J., Jr., Hallman, Lois F., Greeley, Paul O., Butts, Joseph S., and **Halliday, Nellie.** Studies on ketosis. XVII. The rate of disappearance of β-hydroxybutyric acid in fasted and fed rats, 173
Devlin, Henry B. See *Orten and Devlin,* lxxiv
Dillon, Robert T. The colorimetric determination of cholic acid, xxiv
— and **Raymond, Albert L.** The determination of ketone groups in ketocholanic acids, xxv
Di Somma, August A. The constitution of conjugated phenolphthalein formed in the animal body, 277
Dohan, F. C. See *Sunderman and Dohan,* ci
Doisy, Edward A. See *Binkley, McKee, Thayer, and Doisy,* 721, xii
—. See *Huffman, Thayer, and Doisy,* 567, xlv
Dorfman, Albert. See *Saunders, Dorfman, and Koser,* lxxxiv
Dorfman, Ralph I., and **Hamilton, James B.** Concerning the me-

tabolism of testosterone to androsterone, 753, xxvi

Doster-Virtue, Mildred E., and **Virtue, Robert W.** Intravenous fat is not a precursor of cholic acid in the dog, xxvii

—. See *Virtue and Doster-Virtue*, 573, ciii

Drew, Charles R. See *Smith, Tuthill, Drew, and Scudder*, 499

Dubnoff, Jacob W. See *Borsook and Dubnoff*, xv

DuBois, Delafield. See *Stern, Melnick, and DuBois*, xcix

Duff, Virginia B. See *Bodansky and Duff*, xiv

Duval, Anna Marie. See *Iliff, Duval, Kinsman, and Lewis*, xlvii

—. See *Kinsman, Duval, Iliff, and Lewis*, liii

Dyer, Helen M. See *Roe, Hall, and Dyer*, lxxxii

van Dyke, H. B. See *Greep, van Dyke, and Chow*, 289

E

Edsall, John T., and **Mehl, John W.** The effect of denaturing agents on myosin. II. Viscosity and double refraction of flow, 409

—. See *Greenstein and Edsall*, 397

Ehrenstein, Maximilian, and **Stevens, Thelma O.** 6 (α)-Hydroxyprogesterone, xxvii

Eichelberger, Lillian. The distribution of body water in skeletal muscle in normal dogs following injections of potassium salts, xxviii

—, **Fetcher, E. S., Jr., Geiling, E. M. K.,** and **Vos, B. J., Jr.** The distribution of water and electrolytes in the blood of dolphins (*Tursiops truncatus*), 145

—, **Geiling, E. M. K.,** and **Vos, B. J., Jr.** The distribution of water and electrolytes in skeletal muscle of the dolphin (*Tursiops truncatus*), 661

Eisenman, Anna J., Ott, L., Smith, Paul K., and **Winkler, Alexander W.** A study of the permeability of the human erythrocytes to potassium, sodium, and phosphate by the use of radioactive isotopes, xxviii

Ellis, Gordon. See *Voris, Ellis, and Maynard*, 491

Elvehjem, C. A. See *Hegsted, Oleson, Elvehjem, and Hart*, xli

—. See *Nielsen, Oleson, and Elvehjem*, 637

Emerson, Gladys A. See *Mohammad, Emerson, Emerson, and Evans*, 17

Emerson, Oliver H. See *Mohammad, Emerson, Emerson, and Evans*, 17

Emmett, A. D., Kamm, Oliver, and **Sharp, E. A.** The vitamin K activity of 4-amino-2-methyl-1-naphthol and 4-amino-3-methyl-1-naphthol, 285

—, **Peacock, Gail,** and **Brown, Raymond A.** Chemical determination of thiamine by the Melnick-Field method, xxix

Entenman, C., Lorenz, F. W., and **Chaikoff, I. L.** The lipid content of blood, liver, and yolk sac of the newly hatched chick and the changes that occur in these tissues during the first month of life, 231

Espenan, Julia K. See *Beard and Espenan*, ix

—. See *Beard, Espenan, Koven, and Pizzolato*, x

Evans, Herbert M. See *Mohammad, Emerson, Emerson, and Evans*, 17

Everett, Mark R., and **Sheppard, Fay.** Salt catalysis of carbohydrate oxidation, xxix
—. See *Crews, Sheppard, Sudduth, and Everett*, xxiii
—. See *Sheppard, Danielson, and Everett*, lxxxviii

F

Farr, Lee E., and **Alpert, Louis K.** Effect of various endocrine extracts upon the amino acids in the blood of dogs, xxx
Feeney, R. E., and **Strong, F. M.** The microbiological determination of riboflavin, xxxi
Fenton, P. F., and **Pierce, H. B.** Gastric emptying and intestinal absorption of glucose solutions in the rat, xxxi
Fetcher, E. S., Jr. See *Eichelberger, Fetcher, Geiling, and Vos*, 145
Field, Henry, Jr. See *Melnick, Robinson, and Field*, lxvii
Fieser, Louis F. Convenient procedures for the preparation of antihemorrhagic compounds, 391
Flock, Eunice V., and **Bollman, Jesse L.** Muscle glycogen resynthesis after exercise, xxxii
Folch, Jordi, Schneider, H. A., and **Van Slyke, Donald D.** Notes on gasometric plasma lipid analyses, xxxiii
Foster, G. L. See *Graff, Rittenberg, and Foster*, 745
—. See *Rittenberg and Foster*, 737
Foster, William C. See *McClendon, Foster, and Kirkland*, lxiv
Freeman, John A. See *Artom and Freeman*, iv
Freiberg, Irene Koechig. See *Greaves, Freiberg, and Johns*, 243
Friedemann, Theodore E. Seasonal variation in the metabolism of the pneumococcus, xxxiv
Fruton, Joseph S. The specificity of proteolytic enzymes from normal and tumor tissues, xxxiv
— and **Bergmann, Max.** The activation of papain, 153
—, **Irving, George W., Jr.**, and **Bergmann, Max.** Preparation of *d*(−)-glutamic acid from *dl*-glutamic acid by enzymatic resolution, 703

G

Gaebler, Oliver Henry, and **Galbraith, Harry W.** Effects of anterior pituitary preparations in experimental pancreatic diabetes, xxxv
Galbraith, Harry W. See *Gaebler and Galbraith*, xxxv
Gallagher, T. F. The oxidation of bile acid esters by aluminum isopropylate and acetone, xxxvi
Gavin, Gertrude. See *McHenry and Gavin*, lxvi
Geiling, E. M. K. See *Eichelberger, Fetcher, Geiling, and Vos*, 145
—. See *Eichelberger, Geiling, and Vos*, 661
Goldfaden, Mildred F. See *Mitchell, Goldfaden, and Hadro*, lxviii
Golumbic, Calvin. The oxidation of vitamin E, xxxvi
Gorin, Manuel H. See *Moyer and Gorin*, 605
Goss, Harold. See *McElroy and Goss*, lxv
Gottlieb, Rudolph. See *Lozinski and Gottlieb*, 635
Goudsmit, Arnoldus, Jr. See *Power, Goudsmit, and Keith*, lxxvii
Graff, Samuel, Rittenberg, D., and **Foster, G. L.** The glutamic acid of malignant tumors, 745

Gray, E. LeB., Morgareidge, Kenneth, and Cawley, John D. Intestinal absorption of vitamin A in the normal rat, xxxvii

Greaves, Joseph D., Freiberg, Irene Koechig, and Johns, H. E. Preparation and assay of anterior pituitary fractions rich in ketogenic and respiratory quotient-reducing substances, 243

Greaves, Vera D. See *Okey and Greaves*, lxxi

Greeley, Paul O. See *Deuel, Hallman, Greeley, Butts, and Halliday*, 173

Greenberg, David M., Boelter, Muriel D. D., and Knopf, Benjamin W. Factors concerned in the development of tetany by the rat, xxxviii

—. See *Austoni and Greenberg*, iv

Greenberg, Max M. See *Hendrix, Calvin, and Greenberg*, xlii

Greenstein, Jesse P. Effect of salts on the physical properties of sodium thymonucleate, xxxviii

—. The sulfhydryl groups of rabbit and calf liver nucleoprotein, xxxix

— and **Edsall, John T.** The effect of denaturing agents on myosin. I. Sulfhydryl groups as estimated by porphyrindin titration, 397

Greep, R. O., van Dyke, H. B., and Chow, Bacon F. Separation in nearly pure form of luteinizing (interstitial cell-stimulating) and follicle-stimulating (gametogenic) hormones of the pituitary gland, 289

Grossman, Edward. See *Soffer, Grossman, and Sobotka*, xcii

Guerrant, Ralph E. See *Hogan, Powell, and Guerrant*, xlv

Gurin, Samuel, Bachman, Carl, and Wilson, D. Wright. The gonadotropic hormone of urine of pregnancy. II. Chemical studies of preparations having high biological activity, 467

—, —, and —. III. Evidence of purity obtained by studies of electrophoresis and sedimentation, 477

H

Hadro, Gertrude J. See *Mitchell, Goldfaden, and Hadro*, lxviii

Hall, James M. See *Roe, Hall, and Dyer*, lxxxii

Halliday, Nellie. See *Deuel, Hallman, Greeley, Butts, and Halliday*, 173

Hallman, Lois F. See *Deuel, Hallman, Greeley, Butts, and Halliday*, 173

Hamilton, James B. See *Dorfman and Hamilton*, 753, xxvi

Handler, Philip. See *Carter, Handler, and Stevens*, xviii

Hanke, Martin E. A crystalline protein from normal human urine, xl

Harned, Ben K. See *Cole and Harned*, xxi

Harris, Milton. See *Steinhardt and Harris*, xcvii

Harrison, Helen C., and Long, C. N. H. The distribution of ketone bodies in tissues, 209

Hart, E. B. See *Hegsted, Oleson, Elvehjem, and Hart*, xli

Hartman, Carl G. See *Marker and Hartman*, 529

Hastings, A. Baird. See *Van Slyke, Hiller, MacFadyen, Hastings, and Klemperer*, 287

Haven, Frances L. The rate of turnover of the lecithins and cephalins of rat Carcinosarcoma

256 as measured by radioactive phosphorus, xl

Hawes, Roland C. See *Alles and Hawes*, 375

Hegsted, D. Mark, Oleson, J. J., Elvehjem, C. A., and **Hart, E. B.** Studies on additional factors required by the chick, xli

Helmer, O. M., and **Page, Irvine H.** Some properties of "angiotonin," xlii

Hendrix, Byron M., Calvin, D. Bailey, and **Greenberg, Max M.** The relation of the excretion of gastric juice and of urine to the alkalosis of hydrazine intoxication in the rabbit, xlii

Henny, George C. See *Spiegel-Adolf and Henny*, xciv

—. See *Spiegel-Adolf, Seibert, and Henny*, xcv

Hershberg, E. B., and **Wolfe, John K.** A rapid extractor for urinary steroids, 667

Hess, W. C., and **Sullivan, M. X.** Cystinuria; the effect of feeding methionine and other amino acids on the excretion of cystine, xliii

Heuser, G. F. See *Schumacher, Heuser, and Norris*, lxxxvi

von Hevesy, Georg, and **Armstrong, W. D.** Exchange of radiophosphate by dental enamel, xliv

Hill, Elsie. See *Koehler and Hill*, liv

Hiller, Alma. See *Van Slyke, Hiller, MacFadyen, Hastings, and Klemperer*, 287

Hitchings, George H. See *Subbarow and Hitchings*, c

Hodge, Harold Carpenter. The molecular constitution of the calcium phosphates. The concentration limits for the precipitation of secondary calcium phosphate and of hydroxylapatite, xliv

Hogan, Albert G., Powell, E. L., and **Guerrant, Ralph E.** Anemia from lysine deficiency in deaminized casein, xlv

Hogden, Corinne G. See *Robinson and Hogden*, lxxxi

Huffman, Max N., Thayer, Sidney A., and **Doisy, Edward A.** The isolation of dihydrotheelin from human placenta, xlv

—, —, and —. The isolation of α-dihydrotheelin from human placenta, 567

Hughes, Hettie B. The cholesterol content of plasma and erythrocytes as related to thyroid activity, xlvi

I

Iliff, Alberta, Duval, Anna Marie, Kinsman, Gladys M., and **Lewis, Robert C.** A study of the effect of altitude on basal metabolism, xlvii

—. See *Kinsman, Duval, Iliff, and Lewis*, liii

Inman, O. L. Chlorophyll as a part of the photosynthetic mechanism, xlviii

Irving, George W., Jr. See *Fruton, Irving, and Bergmann*, 703

Ivy, A. C. Hormones of the digestive tract, xlix

J

Jacob, Ernest J. See *Beard and Jacob*, x, xi

Jaques, L. B. Heparinase, 445

Jeffries, B. E. See *Leighty, Wick, and Jeffries*, lix

Jensen, H., and **Tolksdorf, Sibylle.** The relation between the interstitial cell-stimulating and thyrotropic effects of the anterior pituitary, xlix

Johns, H. E. See *Greaves, Freiberg, and Johns,* 243

Johnson, Marvin J. See *Berger and Johnson,* 157, 639

Jones, H. B., Chaikoff, I. L., and **Lawrence, John H.** Radioactive phosphorus as an indicator of phospholipid metabolism. X. The phospholipid turnover of fraternal tumors, 319

Jukes, Thomas H. Effect of yeast extract and other supplements on the growth of chicks fed simplified diets, 631

—. See *Babcock and Jukes,* v

K

Kamm, Oliver. See *Emmett, Kamm, and Sharp,* 285

Kassan, Robert J., and **Roe, Joseph H.** The preservation of ascorbic acid in drawn samples of blood, 579

Kassell, Beatrice. Some observations on the behavior of the sulfinic and sulfonic acids corresponding to cysteine, p. l

—. See *Brand, Cahill, and Kassell,* 431

—. See *Brand and Kassell,* 437

Katzman, Philip A. See *Wade and Katzman,* ciii

Keith, Norman M. See *Power, Goudsmit, and Keith,* lxxvii

Kendall, Edward C. The adrenal cortex, li

King, C. G. See *Smythe and King,* xci

Kingsley, George R. A rapid method for the separation of serum albumin and globulin, 731, lii

Kinsman, Gladys M., Duval, Anna Marie, Iliff, Alberta, and **Lewis, Robert C.** The effect of change of altitude on the blood of human subjects, liii

Kinsman, Gladys M. See *Iliff, Duval, Kinsman, and Lewis,* xlvii

Kirkland, W. G. See *McClendon, Foster, and Kirkland,* lxiv

Klein, Daniel. The determination of blood pyruvate in the presence of acetoacetate, liii

Klemperer, Friedrich W. See *Van Slyke, Hiller, MacFadyen, Hastings, and Klemperer,* 287

Knopf, Benjamin W. See *Greenberg, Boelter, and Knopf,* xxxviii

Koehler, Alfred E., and **Hill, Elsie.** Intravenous galactose tolerance, liv

— and **Windsor, Emanuel.** The intravenous injection of acetone in normal and diabetic subjects, lv

Koehn, C. J. A rapid photoelectric method for the determination of vitamin A and carotene in milk, lvi

Koser, S. A. See *Saunders, Dorfman, and Koser,* lxxxiv

Koven, A. Link, Pizzolato, Philip, and **Beard, Howard H.** Creatine-creatinine metabolism and the hormones. V. Effect of parenteral injection of epinephrine, eschatin, percorten, and saline into normal and adrenalectomized rats upon muscle creatine and creatine-creatinine excretion, lvi

—. See *Beard, Espenan, Koven, and Pizzolato,* x

Kyker, Granvil C., Webb, Bailey D., and **Andrews, James C.** The nephelometric determination of quinine in small amounts by means of the photoelectric colorimeter, lvii

L

Larson, Hardy W. See *Blatherwick, Larson, and Sawyer,* 643

Lauffer, Max A., and Price, W. C. Thermal denaturation of tobacco mosaic virus, 1

Lavine, Theodore F., and Whiteley, William M. The reaction of sulfur compounds with nitrous acid, lviii

Lawrence, John H. See *Jones, Chaikoff, and Lawrence,* 319

Leighty, John A., Wick, H. J., and Jeffries, B. E. The percutaneous administration of estrogens followed by progestin in inducing sexual receptivity in spayed guinea pigs, lix

Letonoff, T. V., and Reinhold, John G. Fractionation of serum nonprotein sulfur, lix

—. See *Reinhold and Letonoff,* lxxix

Levene, P. A. Methylation of chondrosamine hydrochloride, 767

Levin, Louis. The quantitative precipitation of gonadotropin from normal urine, lx

Levine, Harry, and Bodansky, Meyer. Determination of paraldehyde in biological fluids, 193

Levine, Victor E. The ascorbic acid content of the blood of the Eskimo, lxi

Levy, Edward D. See *Perlzweig, Levy, and Sarett,* lxxiv

Lewis, Howard B. See *Schultz and Lewis,* 199

Lewis, Robert C. See *Iliff, Duval, Kinsman, and Lewis,* xlvii

—. See *Kinsman, Duval, Iliff, and Lewis,* liii

Link, Karl Paul. See *Moore and Link,* 293

Logan, Milan A., VanderLaan, J. E., and VanderLaan, W. P. The effect of the thyrotropic hormone on the composition and metabolism of the thyroid gland, lxii

Long, C. N. H. See *Harrison and Long,* 209

Long, M. Louisa. See *Bischoff, Long, and Rupp,* xiii

Longwell, Bernard, and Wintersteiner, O. Estrogens with oxygen in Ring B. III. 6-Keto-α-estradiol, 219

Lorenz, F. W. See *Entenman, Lorenz, and Chaikoff,* 231

Lozinski, Ezra, and Gottlieb, Rudolph. A substitute for bile salts for administration with substances possessing vitamin K activity, 635

Ludewig, Stephan. See *Chanutin, Ludewig, and Masket,* xix

Lukens, Francis D. W. See *Stadie, Zapp, and Lukens,* xcvi

M

MacFadyen, Douglas A. See *Van Slyke, Hiller, MacFadyen, Hastings, and Klemperer,* 287

MacKay, Eaton M., Carne, Herbert O., and Wick, Arne N. Antiketogenic and glycogenic activity of citric acid, 59

Mackinney, G. See *Weast and Mackinney,* 551

Macy, Icie G. See *Beach, Teague, and Macy,* vii

Mangun, George H., and Myers, Victor C. Purine content of human cardiac and voluntary muscle, lxii

Marker, R. E., and Hartman, Carl G. Assays of urine from rhesus monkeys for pregnanediol and other steroids, 529

Masket, A. V. See *Chanutin, Ludewig, and Masket,* xix

Mason, Harold L. See *Roepke and Mason,* 103

Mason, Morton F., Blalock, Alfred, and Robinson, C. S. The metabolism of renal cortical tissue in experimental hypertension, lxiii

Mather, Alan. A method for the separation and determination of urinary estrogens, lxiii

Maynard, L. A. See *Voris, Ellis, and Maynard,* 491

McCarthy, Timothy E. See *Sullivan and McCarthy,* c

McClendon, J. F., Foster, William C., and Kirkland, W. G. Thyroid hormone in tissues, lxiv

McCollum, E. V. See *Orent-Keiles and McCollum,* 75

McCoy, Elizabeth. See *Peterson, McDaniel, and McCoy,* lxxv

McCoy, Richard H. Effects of different levels of protein in the diet of the rat, lxiv

McDaniel, L. E. See *Peterson, McDaniel, and McCoy,* lxxv

McElroy, L. W., and Goss, Harold. Synthesis of members of the vitamin B complex in the rumen of the cow, lxv

McHenry, E. W., and Gavin, Gertrude. Observations on fat synthesis and metabolism, lxvi

McKee, R. W. See *Binkley, McKee, Thayer, and Doisy,* 721, xii

Medes, Grace. Enzymic oxidation of cystine to the corresponding sulfone, lxvi

Mehl, John W. See *Edsall and Mehl,* 409

Melnick, Daniel, Robinson, William D., and Field, Henry, Jr. Phosphorylation and stability of thiamine in digestive secretions, lxvii

Melnick, Joseph L. See *Stern, Melnick, and DuBois,* xcix

Melville, Donald B. See *Carter and Melville,* 109

Metzger, Nannette. See *Baumann and Metzger,* vi

Meyer, Karl, and Chaffee, Eleanor. Hyaluronic acid in the pleural fluid associated with a malignant tumor involving the pleura and peritoneum, 83

Miller, Elmer S. See *Barnes, Miller, and Burr,* v

Miller, Herbert C. See *Darrow, Yannet, and Miller,* xxiv

Miller, Leon L. Anaphylactic shock and nitrogen metabolism in the dog, 93

Mitchell, Helen S., Goldfaden, Mildred F., and Hadro, Gertrude J. The effect of iodine and other mineral supplements on cholesterol-induced atherosclerosis in rabbits, lxviii

Mohammad, Ali, Emerson, Oliver H., Emerson, Gladys A., and Evans, Herbert M. Properties of the filtrate factor of the vitamin B_2 complex, with evidence for its multiple nature, 17

Moore, Stanford, and Link, Karl Paul. Carbohydrate characterization. I. The oxidation of aldoses by hypoiodite in methanol. II. The identification of seven aldo-monosaccharides as benzimidazole derivatives, 293

Morgan, Agnes Fay, and Shimotori, Nobuko. Recovery from hypervitaminoses D_2 and D_3 as affected by dietary calcium and phosphorus and vitamin A supply, lxix

Morgareidge, Kenneth. See *Gray, Morgareidge, and Cawley,* xxxvii

Morris, H. P., and Voegtlin, Carl. The effect of methionine on normal and tumor growth, lxix

Morrison, Dempsie B., Williams, Edward F., Jr., and Anderson,

W. A. D. Studies on hematin metabolism in dogs, lxx

Moyer, Laurence S. Electrokinetic aspects of surface chemistry. VIII. The composition of the surface film on the fat droplets in cream, 29

— and **Gorin, Manuel H.** Electrokinetic aspects of surface chemistry. IX. The electric mobilities of quartz and collodion particles in mixtures of horse serum and serum proteins in relation to the mechanism of film formation, 605

Murrill, William A., Block, Walter D., and **Newburgh, L. H.** Analyses of urinary protein and various fractions of human and pig serum protein, 521

Myers, Victor C. See *Mangun and Myers*, lxii

N

Neterval, Charles R. A small apparatus for extracting urinary androgens, 313

Newburgh, L. H. See *Murrill, Block, and Newburgh*, 521

Nielsen, Edward, Oleson, J. J., and **Elvehjem, C. A.** Fractionation of the factor preventing nutritional achromotrichia, 637

Norris, L. C. See *Schumacher, Heuser, and Norris*, lxxxvi

North, H. B. See *Pfiffner and North*, lxxvi, lxxvii

O

Oberst, Fred W. Morphine excretion as determined in hydrolyzed and unhydrolyzed urine from morphine addicts, lxxi

Okey, Ruth, and **Greaves, Vera D.** The nature of the blood and tissue changes produced by feeding cholesterol to guinea pigs, lxxi

Olcott, H. S. The nutritive value of cottonseed meal, lxxii

Oleson, J. J., and **Black, Simon.** Factor W and pantothenic acid in the nutrition of the rat, lxxiii

—. See *Hegsted, Oleson, Elvehjem, and Hart*, xli

—. See *Nielsen, Oleson, and Elvehjem*, 637

Opsahl, Jeanette C. See *Arnow and Opsahl*, 765

Orent-Keiles, Elsa, and **McCollum, E. V.** Mineral metabolism of rats on an extremely sodium-deficient diet, 75

Orten, James M., and **Devlin, Henry B.** The effects of certain inorganic substances on the glucose tolerance of the diabetic rat, lxxiv

Ott, L. See *Eisenman, Ott, Smith, and Winkler*, xxviii

P

Page, Irvine H. See *Helmer and Page*, xlii

Peacock, Gail. See *Emmett, Peacock, and Brown*, xxix

Peck, Robert L. See *Anderson, Creighton, and Peck*, 675

Pennington, Derrol. See *Snell, Pennington, and Williams*, 559, xcii

Perkinson, Jesse D. See *Sealock, Perkinson, and Silberstein*, lxxxvii

Perlman, I., Stillman, N., and **Chaikoff, I. L.** Radioactive phosphorus as an indicator of phospholipid metabolism. XI. The influence of methionine, cystine, and cysteine upon the phospholipid turnover in the liver, 651

Perlzweig, William A., Levy, Edward D., and **Sarett, Herbert.** On the quantitative determination of

nicotinic acid and its derivatives in urine, lxxiv

Peterson, W. H., McDaniel, L. E., and McCoy, Elizabeth. Biotin requirements of *Clostridia* and assay of biological materials for biotin, lxxv

Pfiffner, J. J., and North, H. B. Isolation of a new nitrogenous acid from the adrenal gland, lxxvi

— and —. Some new adrenal steroid ketones, lxxvii

Pierce, H. B. See *Fenton and Pierce*, xxxi

Pizzolato, Philip. See *Beard, Espenan, Koven, and Pizzolato*, x

—. See *Koven, Pizzolato, and Beard*, lvi

Powell, E. L. See *Hogan, Powell, and Guerrant*, xlv

Power, Marschelle H., Goudsmit, Arnoldus, Jr., and Keith, Norman M. The excretion of sulfate by normal men, lxxvii

Price, W. C. See *Lauffer and Price*, 1

Q

Quick, Armand J. Assay method for vitamin K, lxxviii

R

Randall, Lowell O. Effect of repeated insulin hypoglycemia on the lipid composition of rabbit tissues, 129

—. Effect of testosterone on serum lipids in schizophrenia, 137

Raymond, Albert L. See *Dillon and Raymond*, xxv

Reichel, Max. See *Thannhauser and Reichel*, cii

Reinhold, John G., and Letonoff, T. V. Further studies on the determination of inorganic sulfate in serum, lxxix

—. See *Letonoff and Reinhold*, lix

Reiser, Raymond. The relationship of phosphorus to the metabolism of fat and glucose, lxxx

Rinehart, Robert E. See *West, Christensen, and Rinehart*, cvii

Rittenberg, D., and Foster, G. L. A new procedure for quantitative analysis by isotope dilution, with application to the determination of amino acids and fatty acids, 737

—. See *Graff, Rittenberg, and Foster*, 745

—. See *Waelsch and Rittenberg*, civ

Roberts, Richard G. Liquid ammonia as a reagent in the study of biochemical compounds, lxxx

Robertson, William van B., Ropes, Marian W., and Bauer, Walter. Mucinase: a bacterial enzyme which hydrolyzes synovial fluid mucin and other mucins, 261

Robinson, C. S. See *Mason, Blalock, and Robinson*, lxiii

Robinson, Howard W., and Hogden, Corinne G. The biuret reaction in the determination of serum proteins. I. A study of the conditions necessary for the production of a stable color which bears a quantitative relationship to the protein concentration, lxxxi

Robinson, William D. See *Melnick, Robinson, and Field*, lxvii

Roe, Joseph H., Hall, James M., and Dyer, Helen M. The relation of nutrition to gastric function. II. The effect of a dietary deficiency of vitamin C, lxxxii

—. See *Kassan and Roe*, 579

Roepke, Raymond R., and Mason, Harold L. Micelle formation in aqueous solutions of bile salts, 103

Ropes, Marian W. See *Robertson, Ropes, and Bauer*, 261

Routh, Joseph I. Chemical studies on powdered wool, lxxxii
Rupp, J. Jerome. See *Bischoff, Long, and Rupp,* xiii

S

Salmon, W. D. The supplementary relationship of vitamin B_6 and unsaturated fatty acids, lxxxiii
Salomon, Kurt. Studies on invertebrate hemoglobins, lxxxiii
Sarett, Herbert. See *Perlzweig, Levy, and Sarett,* lxxiv
Saunders, Felix, Dorfman, Albert, and **Koser, S. A.** Direct action of nicotinamide as a respiratory stimulator, lxxxiv
Sawyer, Susan D. See *Blatherwick, Larson, and Sawyer,* 643
Schmidt, L. H., and **Dettwiler, Herman.** Development of "sulfapyridine fastness" *in vivo,* lxxxv
Schneider, H. A. See *Folch, Schneider, and Van Slyke,* xxxiii
Schoenheimer, Rudolf. See *Bernhard and Schoenheimer,* 707, 713
—. See *Bloch and Schoenheimer,* 633
—. See *Stetten and Schoenheimer,* 329, 347
Schultz, Julius, and **Lewis, Howard B.** The excretion of volatile selenium compounds after the administration of sodium selenite to white rats, 199
Schumacher, A. E., Heuser, G. F., and **Norris, L. C.** Evidence of the complex nature of the alcoholic precipitate factor required by the chick, lxxxvi
Scudder, John. See *Smith, Tuthill, Drew, and Scudder,* 499
Sealock, Robert Ridgely, Perkinson, Jesse D., and **Silberstein, Hannah E.** Ascorbic acid and the metabolism of the aromatic amino acids, phenylalanine and tyrosine, lxxxvii
Seibert, Florence B. Removal of the impurities, nucleic acid and polysaccharide, from tuberculin protein, 593
—. See *Spiegel-Adolf, Seibert, and Henny,* xcv
Sharp, E. A. See *Emmett, Kamm, and Sharp,* 285
Shear, M. J., and **Turner, Floyd C.** Studies on the chemical treatment of tumors. V. Separation of the hemorrhage-producing fraction from *Bacillus prodigiosus* filtrates, lxxxvii
Sheppard, Fay, Danielson, I. S., and **Everett, Mark R.** pH relations in salt-catalyzed carbohydrate oxidation, lxxxviii
—. See *Crews, Sheppard, Sudduth, and Everett,* xxiii
—. See *Everett and Sheppard,* xxix
Sherman, W. C. Effect of certain fats upon the utilization of carotene, lxxxix
Shimotori, Nobuko. See *Morgan and Shimotori,* lxix
Shohl, Alfred T. The photoelectric measurement of cell volume, xc
Silberstein, Hannah E. See *Sealock, Perkinson, and Silberstein,* lxxxvii
Singal, Sam A. The influence of some amino acids on the production of fatty livers in mice by diet, xc
Smith, Margaret Cammack, and **Spector, Harry.** Further evidence of the mode of action of vitamin D, xc
Smith, Margaret E., Tuthill, Elizabeth, Drew, Charles R., and **Scudder, John.** Studies in blood preservation. Some effects of carbon dioxide, 499

Smith, Paul K. See *Eisenman, Ott, Smith, and Winkler,* xxviii
Smythe, C. V., and King, C. G. A study of ascorbic acid synthesis by rat tissue, xci
Snell, Esmond E., Pennington, Derrol, and Williams, Roger J. The effect of diet on the pantothenic acid content of chick tissues, 559
—, —, and —. Pantothenic acid content of tissues of chicks on diets deficient in this substance, xcii
Sobotka, Harry. See *Soffer, Grossman, and Sobotka,* xcii
Soffer, Louis J., Grossman, Edward, and Sobotka, Harry. Relation between serum magnesium partition and thyroid gland, xcii
Somogyi, Michael. Ketosis caused by overdoses of insulin, xciii
Spector, Harry. See *Smith and Spector,* xc
Sperry, Warren M., and Waelsch, Heinrich. Lipid metabolism in brain and other tissues of the adult rat, xciv
—. See *Waelsch and Sperry,* cv
Spiegel-Adolf, Mona, and Henny, George C. x-Ray analysis of protein denaturation, xciv
—, **Seibert, Florence B., and Henny, George C.** x-Ray analysis of tuberculin proteins, xcv
Stadie, William C., Zapp, John A., Jr., and Lukens, Francis D. W. The fatty acid metabolism of the liver of the diabetic cat, xcvi
Stare, F. J., and Baumann, C. A. The effect of insulin on muscle respiration, 453
— and —. Effect of pancreatectomy on the oxygen uptake of pigeon muscle and its sensitivity to insulin, xcvii
—. See *Baumann and Stare,* 183
Steinbach, H. Burr. Sodium and potassium in frog muscle, 695
Steinhardt, Jacinto, and Harris, Milton. Modes of combination of acids and ions with wool protein, xcvii
Stekol, Jakob A. Homocystine in relation to the synthesis of mercapturic acids, xcviii
Stern, Kurt G., Melnick, Joseph L., and DuBois, Delafield. On the Pasteur enzyme in retina, xcix
Stetten, DeWitt, Jr., and Schoenheimer, Rudolf. The biological relations of the higher aliphatic alcohols to fatty acids, 347
— and —. The conversion of palmitic acid into stearic and palmitoleic acids in rats, 329
Stevens, Carl M. See *Carter, Handler, and Stevens,* xviii
—. See *Carter and Stevens,* 117
Stevens, Thelma O. See *Ehrenstein and Stevens,* xxvii
Stillman, N. See *Perlman, Stillman, and Chaikoff,* 651
Stotz, Elmer. Ascorbic acid oxidase, c
Strong, F. M. See *Feeney and Strong,* xxxi
Subbarow, Yellapragada, and Hitchings, George H. Isolation of γ-aminobutyric acid from liver, c
Sudduth, H. C. See *Crews, Sheppard, Sudduth, and Everett,* xxiii
Sullivan, M. X., and McCarthy, Timothy E. A colorimetric test for methionine, c
—. See *Hess and Sullivan,* xliii
Sunderman, F. William, and Dohan, F. C. Distribution of water and serum electrolytes in experimental diabetes mellitus, ci

T

Tashiro, Shiro. See *Brower and Tashiro,* xvii

Teague, D. Maxwell. See *Beach, Teague, and Macy,* vii
Thannhauser, S. J., and **Reichel, Max.** The structure of sphingomyelin, cii
Thayer, Sidney A. See *Binkley, McKee, Thayer, and Doisy,* 721, xii
—. See *Huffman, Thayer, and Doisy,* 567, xlv
Toennies, Gerrit. Sulfonium reactions of methionine, cii
Tolksdorf, Sibylle. See *Jensen and Tolksdorf,* xlix
Turner, Floyd C. See *Shear and Turner,* lxxxvii
Tuthill, Elizabeth. See *Smith, Tuthill, Drew, and Scudder,* 499

V

VanderLaan, J. E. See *Logan, VanderLaan, and VanderLaan,* lxii
VanderLaan, W. P. See *Logan, VanderLaan, and VanderLaan,* lxii
Van Slyke, Donald D., Hiller, Alma, MacFadyen, Douglas A., Hastings, A. Baird, and **Klemperer, Friedrich W.** On hydroxylysine, 287
—. See *Folch, Schneider, and Van Slyke,* xxxiii
Virtue, Robert W., and **Doster-Virtue, Mildred E.** The failure of intravenously injected fat to produce cholic acid in the dog, 573
— and —. The metabolism of *dl*-methionine sulfoxide in the dog, ciii
—. See *Doster-Virtue and Virtue,* xxvii
Voegtlin, Carl. See *Morris and Voegtlin,* lxix
Voris, Leroy, Ellis, Gordon, and **Maynard, L. A.** The determination of neutral fat glycerol in blood with periodate. Application to the determination of arteriovenous differences in neutral fat, 491
Vos, B. J., Jr. See *Eichelberger, Fetcher, Geiling, and Vos,* 145
—. See *Eichelberger, Geiling, and Vos,* 661

W

Wade, Nelson J., and **Katzman, Philip A.** Gonadotropic-modifying sera of sheep treated with sheep pituitary extract, ciii
Waelsch, Heinrich, and **Rittenberg, D.** The metabolism of glutathione studied with N^{15}, civ
— and **Sperry, Warren M.** Lipid metabolism in brain during myelination, cv
—. See *Sperry and Waelsch,* xciv
Walti, A. Effect of cysteine on ascarids, cvi
Weast, C. A., and **Mackinney, G.** Chlorophyllase, 551
Webb, Bailey D. See *Andrews and Webb,* iii
—. See *Kyker, Webb, and Andrews,* lvii
Webb, Merrill. See *Block, Bolling, and Webb,* xiv
Welch, Mary S. See *Colowick, Welch, and Cori,* 359, 641, xxii
Wesson, Laurence G. A disturbed carbohydrate metabolism in rats maintained more than a year on a fat-deficient diet, cvi
West, Edward S., Christensen, Bert E., and **Rinehart, Robert E.** An improved microtitration method for the determination of carbon dioxide in blood and other fluids, cvii
White, Julius. Effect of the oral administration of benzpyrene on the growth of the rat ingesting a diet low in lysine, cvii

White, Julius. Effect of the oral administration of dimethylaminoazobenzene (butter yellow) on the growth of the rat, cviii

Whiteley, William M. See *Lavine and Whiteley*, lviii

Wick, Arne N. See *MacKay, Carne, and Wick*, 59

Wick, H. J. See *Leighty, Wick, and Jeffries*, lix

Williams, Edward F., Jr. See *Morrison, Williams, and Anderson*, lxx

Williams, Roger J. See *Snell, Pennington, and Williams*, 559, xcii

Wilson, D. Wright. See *Gurin, Backman, and Wilson*, 467, 477

Windsor, Emanuel. See *Koehler and Windsor*, lv

Winkler, Alexander W. See *Eisenman, Ott, Smith, and Winkler*, xxviii

Wintersteiner, O. See *Longwell and Wintersteiner*, 219

Wolfe, John K. See *Hershberg and Wolfe*, 667

Wortis, Herman. See *Bueding and Wortis*, 585, xviii

Y

Yannet, Herman. See *Darrow, Yannet, and Miller*, xxiv

Z

Zapp, John A., Jr. See *Stadie, Zapp, and Lukens*, xcvi

INDEX TO SUBJECTS

A

Acetoacetate: Blood pyruvate determination, presence, *Klein*, liii

Acetone: Bile acid esters, oxidation, effect, *Gallagher*, xxxvi
Diabetes, injection effect, *Koehler and Windsor*, lv

Acetone bodies: Blood, determination, *Crandall*, 539

Achromotrichia: Nutritional, factor preventing, fractionation, *Nielsen, Oleson, and Elvehjem*, 637

Adrenal(s): Cortex, *Kendall*, li
Hydrolysate, Walker sarcoma, effect, *Beard*, viii
Nitrogenous acid, isolation, *Pfiffner and North*, lxxvi
Steroid ketones, *Pfiffner and North*, lxxvii

Adrenalectomy: Creatine-creatinine excretion, *Koven, Pizzolato, and Beard*, lvi
Liver fatty acids, spectroscopically active, deposition, effect, *Barnes, Miller, and Burr*, v
Muscle creatine, *Koven, Pizzolato, and Beard*, lvi

Alanine: Determination, micro-, *Block, Bolling, and Webb*, xiv

Albumin: Blood serum, separation, *Kingsley*, 731, lii
Egg. *See* Egg albumin

Alcohol(s): Aliphatic, higher, fatty acids, biological relations, *Stetten and Schoenheimer*, 347

Aldo-monosaccharide(s): Benzimidazole derivatives, identification, *Moore and Link*, 293

Aldose(s): Oxidation, hypoiodite in methanol, *Moore and Link*, 293

Alkalosis: Hydrazine, gastric juice and urine excretion, effect, *Hendrix, Calvin, and Greenberg*, xlii

Allothreonine: *dl*-, betaine hydrochloride, lipotropic activity, synthesis and determination, *Carter and Melville*, 109

Altitude: Basal metabolism, effect, *Iliff, Duval, Kinsman, and Lewis*, xlvii
Blood, effect, *Kinsman, Duval, Iliff, and Lewis*, liii

Aluminum isopropylate: Bile acid esters, oxidation, effect, *Gallagher*, xxxvi

Amino acid(s): Acylation, pyridine use, *Carter, Handler, and Stevens*, xviii
Basic, blood serum proteins, *Block*, 71
Blood, endocrine extracts, effect, *Farr and Alpert*, xxx
Creatine synthesis, *Beard and Espenan*, ix
Cystine excretion, effect, *Hess and Sullivan*, xliii
d-, oxidase, kidney, Walker sarcoma, effect, *Beard*, viii
Determination, isotope dilution procedure, *Rittenberg and Foster*, 737
Fatty livers, influence, *Singal*, xc
Glycocyamine synthesis, *Beard and Espenan*, ix

Aminobutyric acid: γ-, liver, isolation, *Subbarow and Hitchings*, c
Amino-2-methyl-1-naphthol: 4-, vitamin K activity, *Emmett, Kamm, and Sharp*, 285
Amino-3-methyl-1-naphthol: 4-, vitamin K activity, *Emmett, Kamm, and Sharp*, 285
Ammonia: Liquid, biochemical compounds, study, reagent, *Roberts*, lxxx
Anaphylactic shock: Nitrogen metabolism, relation, *Miller*, 93
Androgenic substance(s): Urine, determination, colorimetric, and fractionation, *Baumann and Metzger*, vi
—, extraction apparatus, *Neterval*, 313
Androsterone: Testosterone relation, *Dorfman and Hamilton*, 753, xxvi
Anemia: Deaminized casein-produced, lysine relation, *Hogan, Powell, and Guerrant*, xlv
Angiotonin: Properties, *Helmer and Page*, xlii
Apatite: Hydroxyl-, precipitation, concentration limits, *Hodge*, xliv
Apparatus: Urine androgenic substances, extraction, *Neterval*, 313
— steroids, extraction, *Hershberg and Wolfe*, 667
Arginine: Blood serum proteins, ingestion effect, *Block*, 71
Ascarid(s): Cysteine effect, *Walti*, cvi
Ascorbic acid: Blood, Eskimo, *Levine*, lxi
—, preservation, *Kassan and Roe*, 579
Oxidase, *Stotz*, c
Ascorbic acid—*continued:*
Phenylalanine metabolism, relation, *Sealock, Perkinson, and Silberstein*, lxxxvii
Synthesis, rat tissue, *Smythe and King*, xci
Tyrosine metabolism, relation, *Sealock, Perkinson, and Silberstein*, lxxxvii
Atherosclerosis: Cholesterol-induced, iodine and mineral supplements, effect, *Mitchell, Goldfaden, and Hadro*, lxviii
Avocado: *d*-Mannoheptulose excretion, effect, *Blatherwick, Larson, and Sawyer*, 643
Azlactone(s): *Carter and Stevens*, 117
Acetic acids, formation, *Carter and Stevens*, 117
Benzoyl-α-aminocrotonic acid, preparation, *Carter and Stevens*, 117
Azobenzene: Dimethylamino-, growth effect, *White*, cviii

B

Bacillus: Tubercle. *See* Tubercle bacillus
Bacillus prodigiosus: Filtrates, hemorrhage-producing fraction, *Shear and Turner*, lxxxvii
Bacteria: Enzyme, mucin-hydrolyzing, *Robertson, Ropes, and Bauer*, 261
Basal metabolism: Altitude effect, *Iliff, Duval, Kinsman, and Lewis*, xlvii
Benzoyl-α-aminocrotonic acid: Azlactone II, preparation, *Carter and Stevens*, 117
Benzpyrene: Growth, lysine-low diet and, effect, *White*, cvii
Bile acid: Esters, oxidation, aluminum isopropylate and acetone effect, *Gallagher*, xxxvi

Bile salt(s): Solution, micelle formation, *Roepke and Mason*, 103
Substitute, vitamin K, administration with, *Lozinski and Gottlieb*, 635
Biochemical compound(s): Ammonia, liquid, reagent for study, *Roberts*, lxxx
Biotin: Biological material, assay, *Peterson, McDaniel, and McCoy*, lxxv
Clostridia requirements, *Peterson, McDaniel, and McCoy*, lxxv
Biuret reaction: Blood serum proteins, determination, use, *Robinson and Hogden*, lxxxi
Blood: Acetone bodies, determination, *Crandall*, 539
Altitude effect, *Kinsman, Duval, Iliff, and Lewis*, liii
Amino acids, endocrine extracts, effect, *Farr and Alpert*, xxx
Ascorbic acid, Eskimo, *Levine*, lxi
— — preservation, *Kassan and Roe*, 579
Carbon dioxide determination, titration, micro-, *West, Christensen, and Rinehart*, cvii
Cholesterol, dietary, effect, *Okey and Greaves*, lxxi
Cholinesterases, *Alles and Hawes*, 375
Electrolytes, dolphin, *Eichelberger, Fetcher, Geiling, and Vos*, 145
Glycerol determination, periodate use, *Voris, Ellis, and Maynard*, 491
Lipids, chick, changes, *Entenman, Lorenz, and Chaikoff*, 231
Preservation, carbon dioxide effect, *Smith, Tuthill, Drew, and Scudder*, 499
Blood—*continued:*
Pyruvate determination, acetoacetate presence, *Klein*, liii
— stabilization and determination, *Bueding and Wortis*, xviii
Pyruvic acid stabilization and determination, *Bueding and Wortis*, 585
Water, dolphin, *Eichelberger, Fetcher, Geiling, and Vos*, 145
Blood cell(s): Red, cholesterol, thyroid activity, relation, *Hughes*, xlvi
—, permeability, potassium, sodium, and phosphate, radioactive isotopes in study, *Eisenman, Ott, Smith, and Winkler*, xxviii
Volume measurement, photoelectric, *Shohl*, xc
Blood plasma: Cholesterol, thyroid activity, relation, *Hughes*, xlvi
Lipids, determination, gasometric, *Folch, Schneider, and Van Slyke*, xxxiii
Phospholipids, dietary fat effect, *Artom and Freeman*, iv
Blood serum: Albumin, separation, *Kingsley*, 731, lii
Calcium, *Chanutin, Ludewig, and Masket*, xix
Electrolytes, distribution, diabetes, *Sunderman and Dohan*, ci
Globulin, separation, *Kingsley*, 731, lii
Gonadotropic activity, pituitary extract effect, *Wade and Katzman*, ciii
Lipids, schizophrenia, testosterone effect, *Randall*, 137
Magnesium, *Chanutin, Ludewig, and Masket*, xix
— partition, thyroid gland relation, *Soffer, Grossman, and Sobotka*, xcii

Blood serum—*continued:*
Proteins, amino acids, basic, *Block*, 71
—, analysis, *Murrill, Block, and Newburgh*, 521
—, arginine ingestion effect, *Block*, 71
—, collodion particles, electric mobilities, film formation, relation, *Moyer and Gorin*, 605
—, determination, biuret reaction use, *Robinson and Hogden*, lxxxi
—, quartz particles, electric mobilities, film formation, relation, *Moyer and Gorin*, 605
Sulfate, inorganic, determination, *Reinhold and Letonoff*, lxxix
Sulfur, non-protein, fractionation, *Letonoff and Reinhold*, lix
Water, distribution, diabetes, *Sunderman and Dohan*, ci
Blood sugar: Galactose effect, *Darby and Day*, 503
Xylose effect, *Darby and Day*, 503
Brain: Lipids, metabolism, *Sperry and Waelsch*, xciv
—, —, myelination, *Waelsch and Sperry*, cv
Butter yellow: *See* Dimethylaminoazobenzene
Butyric acid: γ-Amino-, liver, isolation, *Subbarow and Hitchings*, c
β-Hydroxy-, disappearance rate, *Deuel, Hallman, Greeley, Butts, and Halliday*, 173

C

Calcium: Blood serum, *Chanutin, Ludewig, and Masket*, xix
Dietary, hypervitaminosis D_2 and D_3, effect, *Morgan and Shimotori*, lxix
Uterus effect, *Cole and Harned*, xxi
Calcium phosphate(s): Chemical constitution, *Hodge*, xliv
Secondary, precipitation, concentration limits, *Hodge*, xliv
Carbohydrate(s): Characterization, *Moore and Link*, 293
Metabolism, fat-deficient diet effect, *Wesson*, cvi
Oxidation, keto-l-uronic acids, relation, *Crews, Sheppard, Sudduth, and Everett*, xxiii
—, salt catalysis, *Everett and Sheppard*, xxix
—, salt-catalyzed, hydrogen ion concentration relation, *Sheppard, Danielson, and Everett*, lxxxviii
Carbon dioxide: Blood, determination, titration, micro-, *West, Christensen, and Rinehart*, cvii
— preservation, effect, *Smith, Tuthill, Drew, and Scudder*, 499
Body fluids, determination, titration, micro-, *West, Christensen, and Rinehart*, cvii
Carcinosarcoma: 256, lecithins and cephalins, turnover, radioactive phosphorus as indicator, *Haven*, xl
Carotene: Milk, determination, photoelectric, *Koehn*, lvi
Utilization, fat effect, *Sherman*, lxxxix
Casein: Deaminized, anemia from, lysine relation, *Hogan, Powell, and Guerrant*, xlv
Cephalin(s): Carcinosarcoma 256, turnover, radioactive phosphorus as indicator, *Haven*, xl
Chick: Antidermatitis factor, *Babcock and Jukes*, v
Growth factor, nature, *Schumacher, Heuser, and Norris*, lxxxvi

Chick—*continued:*
Nutrition factors, *Hegsted, Oleson, Elvehjem, and Hart,* xli
Children: Creatine and creatinine excretion, *Beach, Teague, and Macy,* vii
Chlorophyll: Photosynthetic mechanism, relation, *Inman,* xlviii
Chlorophyllase: *Weast and Mackinney,* 551
Cholanic acid(s): Keto-, ketone groups, determination, *Dillon and Raymond,* xxv
Cholesterol: Blood plasma and blood cells, red, thyroid activity, relation, *Hughes,* xlvi
Dietary, blood and tissue effect, *Okey and Greaves,* lxxi
-Induced atherosclerosis, iodine and mineral supplements, effect, *Mitchell, Goldfaden, and Hadro,* lxviii
Cholic acid: Determination, colorimetric, *Dillon,* xxiv
Fat injection effect, *Virtue and Doster-Virtue,* 573
— relation, *Doster-Virtue and Virtue,* xxvii
Choline: Deficiency, rats, *Christensen,* xx
Oxidase, liver, fatty acid action, *Bernheim,* 291
Cholinesterase(s): Blood, *Alles and Hawes,* 375
Chondrosamine hydrochloride: Methylation, *Levene,* 767
Citric acid: Antiketogenic activity, *MacKay, Carne, and Wick,* 59
Glycogenic activity, *MacKay, Carne, and Wick,* 59
Clostridia: Biotin requirements, *Peterson, McDaniel, and McCoy,* lxxv
Coenzyme: I, oxidation-reduction potential, *Borsook,* 629
Collodion: Particles, blood serum proteins, electric mobilities, film formation, relation, *Moyer and Gorin,* 605
Copper: Dehydrogenase action, *Bernheim,* 485
Cortin: Sarcoma, Walker, effect, *Beard,* viii
Cottonseed meal: Nutritive value, *Olcott,* lxxii
Cream: Fat droplets, surface film composition, *Moyer,* 29
Creatine: Amino acids, synthesis from, *Beard and Espenan,* ix
-Creatinine excretion, adrenalectomy, epinephrine, eschatin, percorten, and saline injection effect, *Koven, Pizzolato, and Beard,* lvi
Creatinine-, excretion, sarcosine and glycine ingestion and injection effect, *Beard,* vii
-Creatinine excretion, sex hormones and creatine and creatinine injection effect, *Beard and Jacob,* x, xi
— metabolism, hormones, relation, *Beard and Jacob,* x, xi *Koven, Pizzolato, and Beard,* lvi
—, water, salt, and phosphate metabolism, relation, *Beard, Espenan, Koven, and Pizzolato,* x
Cyanamide, synthesis from, *Beard and Espenan,* ix
Excretion, growth periods, effect, *Beach, Teague, and Macy,* vii
Formation, biological, *Bloch and Schoenheimer,* 633
Muscle, adrenalectomy, epinephrine, eschatin, percorten, and saline injection effect, *Koven, Pizzolato, and Beard,* lvi
Tissue, glycocyamine and methionine as precursors, *Borsook and Dubnoff,* xv

Creatine—*continued:*
Urea, synthesis from, *Beard and Espenan,* ix
Creatinine: Creatine-, excretion, adrenalectomy, epinephrine, eschatin, percorten, and saline injection effect, *Koven, Pizzolato, and Beard,* lvi
-Creatine excretion, sarcosine and glycine ingestion and injection effect, *Beard,* vii
Creatine-, excretion, sex hormones and creatine and creatinine, injection effect, *Beard and Jacob,* x, xi
—, metabolism, hormones, relation, *Beard and Jacob,* x, xi *Koven, Pizzolato, and Beard,* lvi
—, water, salt, and phosphate metabolism, relation, *Beard, Espenan, Koven, and Pizzolato,* x
Excretion, growth periods, effect, *Beach, Teague, and Macy,* vii
Crotonic acid: Benzoyl-α-amino-, azlactone II, preparation, *Carter and Stevens,* 117
Cyanamide: Creatine and glycocyamine synthesis, *Beard and Espenan,* ix
Cysteine: Ascarids, effect, *Walti,* cvi
Liver phospholipid turnover, radioactive phosphorus as indicator, *Perlman, Stillman, and Chaikoff,* 651
Sulfinic and sulfonic acids, relation, *Kassell,* p. l
Cystine: Homo-, mercapturic acid synthesis relation, *Stekol,* xcviii
Liver phospholipid turnover, radioactive phosphorus as indicator, *Perlman, Stillman, and Chaikoff,* 651
Cystine—*continued:*
Oxidation to sulfone, enzymatic, *Medes,* lxvi
Urine, determination, *Brand, Cahill, and Kassell,* 431
Cystinuria: Amino acid administration effect, *Hess and Sullivan,* xliii
Dog, *Brand and Kassell,* xvi *Brand, Cahill, and Kassell,* 431
Irish terriers, *Brand, Cahill, and Kassell,* 431
Methionine administration effect, *Hess and Sullivan,* xliii

D

Dehydrogenase(s): Copper action, *Bernheim,* 485
Papain action, *Bernheim,* 141
Phenylhydrazine action, *Bernheim,* 485
Trypsin action, *Bernheim,* 141
Dermatitis: Anti-, factor, chick, *Babcock and Jukes,* v
—, —. *See also* Pantothenic acid
Deuterium: Fatty acids, unsaturated, body, behavior, indicator, *Bernhard and Schoenheimer,* 707
Diabetes: Acetone injection effect, *Koehler and Windsor,* lv
Blood serum electrolytes, distribution, *Sunderman and Dohan,* ci
Glucose tolerance, inorganic substances, effect, *Orten and Devlin,* lxxiv
Liver fatty acid metabolism, *Stadie, Zapp, and Lukens,* xcvi
Pancreatic, pituitary, anterior, extracts, effect, *Gaebler and Galbraith,* xxxv
Water distribution, *Sunderman and Dohan,* ci

Diet: Pantothenic acid, tissues, chick, effect, *Snell, Pennington, and Williams*, 559
See also Nutrition
Digestive secretion(s): Thiamine phosphorylation and stability, *Melnick, Robinson, and Field*, lxvii
Dihydrotheelin: α-, placenta, isolation, *Huffman, Thayer, and Doisy*, 567
Placenta, isolation, *Huffman, Thayer, and Doisy*, xlv
Dimethylaminoazobenzene: Growth effect, *White*, cviii
Dipeptidase(s): Activation, *Berger and Johnson*, 639
Dolphin: Blood water and electrolytes, *Eichelberger, Fetcher, Geiling, and Vos*, 145
Muscle, skeletal, water and electrolytes, *Eichelberger, Geiling, and Vos*, 661

E

Egg: Yolk sac, lipids, chick, changes, *Entenman, Lorenz, and Chaikoff*, 231
Egg albumin: Denatured, solutions, viscosity, *Bull*, 39
Reducing groups, determination, porphyrindin use, *Brand and Kassell*, 437
Solutions, viscosity, *Bull*, 39
Electrokinetics: Surface chemistry, *Moyer*, 29
Moyer and Gorin, 605
Electrolyte(s): Blood, dolphin, *Eichelberger, Fetcher, Geiling, and Vos*, 145
— serum, distribution, diabetes, *Sunderman and Dohan*, ci
Muscle, *Darrow, Yannet, and Miller*, xxiv
—, skeletal, dolphin, *Eichelberger, Geiling, and Vos*, 661
Enamel: Tooth, radiophosphate exchange, *von Hevesy and Armstrong*, xliv
Endocrine(s): Extracts, blood amino acids, effect, *Farr and Alpert*, xxx
Enzyme(s): Cystine oxidation to sulfone, *Medes*, lxvi
d(−)-Glutamic acid, *dl*-glutamic acid preparation, *Fruton, Irving, and Bergmann*, 703
Pasteur, retina, *Stern, Melnick, and DuBois*, xcix
Proteolytic, tumor and normal tissue, *Fruton*, xxxiv
See also Chlorophyllase, Cholinesterase, Coenzyme, Dehydrogenase, Dipeptidase, Heparinase, Leucylpeptidase, Lipase, Mucinase, Oxidase, Papain, Trypsin
Epinephrine: Muscle creatine and creatine-creatinine excretion, adrenalectomy, effect, *Koven, Pizzolato, and Beard*, lvi
Erythrocyte(s): *See* Blood cell, red
Eschatin: Muscle creatine and creatine-creatinine excretion, adrenalectomy, effect, *Koven, Pizzolato, and Beard*, lvi
Eskimo: Blood ascorbic acid, *Levine*, lxi
Estradiol: 6-Keto-α-, *Longwell and Wintersteiner*, 219
Estrogenic substance(s): Oxygen in Ring B, *Longwell and Wintersteiner*, 219
Progestin and, sexual receptivity, effect, *Leighty, Wick, and Jeffries*, lix
Urine, separation and determination, *Mather*, lxiii
Exercise: Muscle glycogen effect, *Flock and Bollman*, xxxii

F

Factor W: Pantothenic acid and, rat, *Oleson and Black*, lxxiii
Fasting: β-Hydroxybutyric acid disappearance rate, *Deuel, Hallman, Greeley, Butts, and Halliday*, 173
Fat(s): Carotene utilization, effect, *Sherman*, lxxxix
Cholic acid production, injection effect, *Virtue and Doster-Virtue*, 573
— — relation, *Doster-Virtue and Virtue*, xxvii
-Deficient diet, carbohydrate metabolism, effect, *Wesson*, cvi
Dietary, blood plasma phospholipids, effect, *Artom and Freeman*, iv
Droplets, cream, surface film composition, *Moyer*, 29
Metabolism, *McHenry and Gavin*, lxvi
—, phosphorus relation, *Reiser*, lxxx
Neutral, glycerol, blood, determination, periodate use, *Voris, Ellis, and Maynard*, 491
Synthesis, *McHenry and Gavin*, lxvi
Fatty acid(s): Alcohols, aliphatic, higher, biological relations, *Stetten and Schoenheimer*, 347
Determination, isotope dilution procedure, *Rittenberg and Foster*, 737
Liver choline oxidase, action, *Bernheim*, 291
Metabolism, liver, diabetes, *Stadie, Zapp, and Lukens*, xcvi
Spectroscopically active, liver deposition, adrenalectomy effect, *Barnes, Miller, and Burr*, v
Fatty acid(s)—*continued:*
Unsaturated, body, behavior, deuterium as indicator, *Bernhard and Schoenheimer*, 707
—, vitamin B_6, nutritional relation, *Salmon*, lxxxiii
Film formation: Mechanism, *Moyer and Gorin*, 605
Filtrate factor: Vitamin B_2 complex, nature, *Mohammad, Emerson, Emerson, and Evans*, 17
Follicle-stimulating hormone: Pituitary, separation, *Greep, van Dyke, and Chow*, 289

G

Galactose: Blood sugar, effect, *Darby and Day*, 503
Tolerance, intravenous, *Koehler and Hill*, liv
Gastric: *See* Stomach
Gastrointestinal tract: Hormones, *Ivy*, xlix
Globulin: Blood serum, separation, *Kingsley*, 731, lii
Glucose: Metabolism, phosphorus relation, *Reiser*, lxxx
Oxidation and phosphorylation, *Colowick, Welch, and Cori*, 641
Phosphorylation, kidney extract effect, *Colowick, Welch, and Cori*, 359, xxii
Solutions, absorption, intestine, stomach emptying relation, *Fenton and Pierce*, xxxi
Tolerance, diabetes, inorganic substances, effect, *Orten and Devlin*, lxxiv
Glutamic acid: *d*(−)-, *dl*-glutamic acid preparation, enzymatic, *Fruton, Irving, and Bergmann*, 703
dl-, *d*(−)-glutamic acid preparation, enzymatic, *Fruton, Irving, and Bergmann*, 703

Glutamic acid—*continued:*
Racemization, *Arnow and Opsahl*, 765
Tumors, malignant, *Graff, Rittenberg, and Foster*, 745
Glutathione: Metabolism, isotopic nitrogen in study, *Waelsch and Rittenberg*, civ
Glycerol: Blood, determination, periodate use, *Voris, Ellis, and Maynard*, 491
Glycine: Creatinine-creatine excretion, ingestion and injection effect, *Beard*, vii
Glycocyamine: Amino acids, urea, and cyanamide, synthesis from, *Beard and Espenan*, ix
Tissue creatine precursor, *Borsook and Dubnoff*, xv
Glycogen: Muscle, exercise effect, *Flock and Bollman*, xxxii
Glycogenesis: Citric acid relation, *MacKay, Carne, and Wick*, 59
Gonadotropic activity: Blood serum, pituitary extract effect, *Wade and Katzman*, ciii
Gonadotropic hormone: Urine, pregnancy, *Gurin, Bachman, and Wilson*, 467, 477
—, —, chemistry, *Gurin, Bachman, and Wilson*, 467
—, —, purity, *Gurin, Bachman, and Wilson*, 477
Gonadotropin: Urine, normal, determination, *Levin*, lx
Growth: Benzpyrene and lysine-low diet, effect, *White*, cvii
Creatine and creatinine excretion, *Beach, Teague, and Macy*, vii
Dimethylaminoazobenzene effect, *White*, cviii
Methionine effect, *Morris and Voegtlin*, lxix
Yeast extract supplement, effect, *Jukes*, 631

H

Heart: *See also* Muscle
Hematin: Metabolism, *Morrison, Williams, and Anderson*, lxx
Hemin: *Spirographis*, oxidation-reduction potentials, *Barron*, 51
Hemochromogen(s): *Spirographis*, oxidation-reduction potentials, *Barron*, 51
Hemocyanin: *Limulus polyphemus*, osmotic pressure, molecular weight, and dissociation, *Burk*, 511
Hemoglobin(s): Invertebrate, *Salomon*, lxxxiii
Hemorrhage: Anti-, compounds, preparation, *Fieser*, 391
-Producing fraction, *Bacillus prodigiosus* filtrates, *Shear and Turner*, lxxxvii
Heparinase: *Jaques*, 445
Hibernation: Neoplasms, influence, *Bischoff, Long, and Rupp*, xiii
Histidine: Determination, *Block*, 67
Homocystine: Mercapturic acid synthesis relation, *Stekol*, xcviii
Hormone(s): Creatine-creatinine metabolism, relation, *Beard and Jacob*, x, xi
Koven, Pizzolato, and Beard, lvi
Digestive tract, *Ivy*, xlix
Hyaluronic acid: Pleural fluid, tumor, malignant, relation, *Meyer and Chaffee*, 83
Hydrazine: Alkalosis, gastric juice and urine excretion, effect, *Hendrix, Calvin, and Greenberg*, xlii
Hydrogen ion concentration: Carbohydrate oxidation, salt-catalyzed, relation, *Sheppard, Danielson, and Everett*, lxxxviii

Hydroxybutyric acid: β-, disappearance rate, *Deuel, Hallman, Greeley, Butts, and Halliday,* 173
Hydroxylapatite: Precipitation, concentration limits, *Hodge,* xliv
Hydroxylysine: *Van Slyke, Hiller, MacFadyen, Hastings, and Klemperer,* 287
Hydroxyprogesterone: 6(α)-, *Ehrenstein and Stevens,* xxvii
Hypertension: Kidney cortex tissue metabolism, relation, *Mason, Blalock, and Robinson,* lxiii
Hypervitaminosis: D_2 and D_3, dietary calcium, phosphorus, and vitamin A effect, *Morgan and Shimotori,* lxix
Hypoglycemia: Insulin, tissue lipids, effect, *Randall,* 129

I

Inorganic substance(s): Glucose tolerance, diabetes, effect, *Orten and Devlin,* lxxiv
Insulin: Hypoglycemia, tissue lipids, effect, *Randall,* 129
Ketosis, *Somogyi,* xciii
Muscle oxygen uptake, pancreatectomy and, effect, *Stare and Baumann,* xcvii
— respiration, effect, *Stare and Baumann,* 453
Interstitial cell-stimulating hormone: Pituitary, anterior, thyrotropic hormone, relation, *Jensen and Tolksdorf,* xlix
Intestine: Glucose solutions, absorption, stomach emptying relation, *Fenton and Pierce,* xxxi
Vitamin A absorption, *Gray, Morgareidge, and Cawley,* xxxvii
Iodine: Atherosclerosis, cholesterol-induced, effect, *Mitchell, Goldfaden, and Hadro,* lxviii
Iron: Metabolism, radioactive isotope in study, *Austoni and Greenberg,* iv
Radioactive, iron metabolism, use in study, *Austoni and Greenberg,* iv
Isotope: Dilution, analysis by, *Rittenberg and Foster,* 737

K

Ketocholanic acid(s): Ketone groups, determination, *Dillon and Raymond,* xxv
Keto-α-estradiol: 6-, *Longwell and Wintersteiner,* 219
Ketogenesis: Anti-, citric acid relation, *MacKay, Carne, and Wick,* 59
Ketogenic substance(s): Pituitary, anterior, fractions, preparation and assay, *Greaves, Freiberg, and Johns,* 243
Ketone(s): Groups, ketocholanic acids, determination, *Dillon and Raymond,* xxv
Steroid, adrenals, *Pfiffner and North,* lxxvii
Ketone body: Tissues, *Harrison and Long,* 209
Ketosis: *Deuel, Hallman, Greeley, Butts, and Halliday,* 173
Insulin, *Somogyi,* xciii
Keto-l-uronic acid(s): Carbohydrate oxidation, relation, *Crews, Sheppard, Sudduth, and Everett,* xxiii
Preparation, *Crews, Sheppard, Sudduth, and Everett,* xxiii
Kidney: *d*-Amino acid oxidase, Walker sarcoma, effect, *Beard,* viii
Cortex tissue, metabolism, hypertension relation, *Mason, Blalock, and Robinson,* lxiii
Extract, glucose phosphorylation, effect, *Colowick, Welch, and Cori,* 359, xxii
Transamination, *Cohen,* xx

L

Lecithin(s): Carcinosarcoma 256, turnover, radioactive phosphorus as indicator, *Haven,* lx

Leucylpeptidase: Occurrence, *Berger and Johnson,* 157

Limulus polyphemus: Hemocyanin, osmotic pressure, molecular weight, and dissociation, *Burk,* 511

Lipase: Pancreas, thiamine effect, *Brower and Tashiro,* xvii

Lipid(s): Blood, chick, changes, *Entenman, Lorenz, and Chaikoff,* 231

— plasma, determination, gasometric, *Folch, Schneider, and Van Slyke,* xxxiii

— serum, schizophrenia, testosterone effect, *Randall,* 137

Brain, metabolism, *Sperry and Waelsch,* xciv

—, —, myelination, *Waelsch and Sperry,* cv

Egg yolk sac, chick, changes, *Entenman, Lorenz, and Chaikoff,* 231

Liver, chick, changes, *Entenman, Lorenz, and Chaikoff,* 231

Tissue, insulin hypoglycemia effect, *Randall,* 129

—, metabolism, *Sperry and Waelsch,* xciv

Tubercle bacillus, avian, bound, *Anderson, Creighton, and Peck,* 675

— —, chemistry, *Anderson, Creighton, and Peck,* 675

Liver: γ-Aminobutyric acid isolation, *Subbarow and Hitchings,* c

Choline oxidase, fatty acid action, *Bernheim,* 291

Liver—*continued:*

Fatty acid metabolism, diabetes, *Stadie, Zapp, and Lukens,* xcvi

— acids, spectroscopically active, deposition, adrenalectomy effect, *Barnes, Miller, and Burr,* v

—, amino acid influence, *Singal,* xc

Lipids, chick, changes, *Entenman, Lorenz, and Chaikoff,* 231

Nucleoprotein, sulfhydryl groups, *Greenstein,* xxxix

Phospholipid turnover, methionine, cystine, and cysteine influence, radioactive phosphorus as indicator, *Perlman, Stillman, and Chaikoff,* 651

Transamination, *Cohen,* xx

Lung: *See also* Pleural fluid

Luteinizing hormone: Pituitary, separation, *Greep, van Dyke, and Chow,* 289

Lysine: Anemia, deaminized casein-produced, relation, *Hogan, Powell, and Guerrant,* xlv

Hydroxy-, *Van Slyke, Hiller, MacFadyen, Hastings, and Klemperer,* 287

-Low diet, benzpyrene and, growth effect, *White,* cvii

M

Magnesium: Blood serum, *Chanutin, Ludewig, and Masket,* xix

— —, partition, thyroid gland relation, *Soffer, Grossman, and Sobotka,* xcii

Malonate: Tissue respiration, effect, *Baumann and Stare,* 183

Mannoheptulose: *d-*, excretion, avocado ingestion effect, *Blatherwick, Larson, and Sawyer,* 643

Mercapturic acid(s): Synthesis, homocystine relation, *Stekol,* xcviii

Mercury: Determination, micro-, *Crandall*, 539
Metabolism: Basal. *See* Basal metabolism
Methionine: Cystine excretion, effect, *Hess and Sullivan*, xliii
Growth effect, *Morris and Voegtlin*, lxix
Liver phospholipid turnover, radioactive phosphorus as indicator, *Perlman, Stillman, and Chaikoff*, 651
Sulfonium reactions, *Toennies*, cii
Test, colorimetric, *Sullivan and McCarthy*, c
Tissue creatine precursor, *Borsook and Dubnoff*, xv
Tumor effect, *Morris and Voegtlin*, lxix
Methionine sulfoxide: *dl*-, metabolism, *Virtue and Doster-Virtue*, ciii
Milk: Carotene determination, photoelectric, *Koehn*, lvi
Vitamin A determination, photoelectric, *Koehn*, lvi
Mineral(s): Atherosclerosis, cholesterol-induced, effect, *Mitchell, Goldfaden, and Hadro*, lxviii
Metabolism, sodium-deficient diet effect, *Orent-Keiles and McCollum*, 75
Monosaccharide(s): Aldo-, benzimidazole derivatives, identification, *Moore and Link*, 293
Morphine: Excretion, *Oberst*, lxxi
Mosaic: Tobacco virus, heat denaturation, *Lauffer and Price*, 1
Mucin(s): -Hydrolyzing enzyme, bacterial, *Robertson, Ropes, and Bauer*, 261
Mucinase: *Robertson, Ropes, and Bauer*, 261
Muscle: Creatine, adrenalectomy, epinephrine, eschatin, percorten, and saline injection effect, *Koven, Pizzolato, and Beard*, lvi
Electrolyte, *Darrow, Yannet, and Miller*, xxiv
Glycogen, exercise effect, *Flock and Bollman*, xxxii
Heart, purines, *Mangun and Myers*, lxii
Oxygen uptake, pancreatectomy and insulin effect, *Stare and Baumann*, xcvii
Potassium, frog, *Steinbach*, 695
Respiration, insulin effect, *Stare and Baumann*, 453
Skeletal, electrolytes, dolphin, *Eichelberger, Geiling, and Vos*, 661
—, water, dolphin, *Eichelberger, Geiling, and Vos*, 661
—, —, potassium salts injection effect, *Eichelberger*, xxviii
Sodium, frog, *Steinbach*, 695
Voluntary, purines, *Mangun and Myers*, lxii
Water, *Darrow, Yannet, and Miller*, xxiv
Myelination: Brain lipid metabolism, *Waelsch and Sperry*, cv
Myosin: Denaturing agents, effect, *Greenstein and Edsall*, 397
Edsall and Mehl, 409
Sulfhydryl groups, determination, porphyrindin titration, *Greenstein and Edsall*, 397
Viscosity and double refraction of flow, *Edsall and Mehl*, 409

N

Naphthol: 4-Amino-2-methyl-1-, and 4-amino-3-methyl-1-, vitamin K activity, *Emmett, Kamm, and Sharp*, 285

Neoplasm(s): Hibernation influence, *Bischoff, Long, and Rupp,* xiii
See also Carcinosarcoma, Sarcoma, Tumor
Nicotinamide: Respiratory stimulation, action, *Saunders, Dorfman, and Koser,* lxxxiv
Nicotinic acid: Derivatives, urine, determination, *Perlzweig, Levy, and Sarett,* lxxiv
Urine, determination, *Perlzweig, Levy, and Sarett,* lxxiv
Nitrogen: Isotope, glutathione metabolism study by, *Waelsch and Rittenberg,* civ
Metabolism, anaphylactic shock, relation, *Miller,* 93
Nitrogenous acid: Adrenals, isolation, *Pfiffner and North,* lxxvi
Nitrous acid: Sulfur compounds, reaction, *Lavine and Whiteley,* lviii
Nucleic acid: Tuberculin protein, removal, *Seibert,* 593
Nucleoprotein(s): Liver, sulfhydryl groups, *Greenstein,* xxxix
Nutrition: Chick, *Hegsted, Oleson, Elvehjem, and Hart,* xli
Gastric function, relation, *Roe, Hall, and Dyer,* lxxxii
Rat, factor W and pantothenic acid, *Oleson and Black,* lxxiii
See also Diet

O

Oxidase: *d*-Amino acid, kidney, Walker sarcoma, effect, *Beard,* viii
Ascorbic acid, *Stotz,* c
Choline, liver, fatty acid action, *Bernheim,* 291
Oxidation(s): Biological, *Barron,* 51
Oxygen: Muscle, uptake, pancreatectomy and insulin effect, *Stare and Baumann,* xcvii

P

Palmitic acid: Formation rate, body, *Bernhard and Schoenheimer,* 713
Palmitoleic acid, conversion, *Stetten and Schoenheimer,* 329
Stearic acid, conversion, *Stetten and Schoenheimer,* 329
Palmitoleic acid: Palmitic acid conversion, *Stetten and Schoenheimer,* 329
Pancreas: Diabetes, pituitary, anterior, extracts, effect, *Gaebler and Galbraith,* xxxv
Lipase, thiamine effect, *Brower and Tashiro,* xvii
Pancreatectomy: Muscle oxygen uptake, insulin and, effect, *Stare and Baumann,* xcvii
Pantothenic acid: *Babcock and Jukes,* v
-Deficient diet, tissue pantothenic acid, effect, *Snell, Pennington, and Williams,* xcii
Factor W and, rat, *Oleson and Black,* lxxiii
Tissues, chick, diet effect, *Snell, Pennington, and Williams,* 559
—, pantothenic acid-deficient diet, effect, *Snell, Pennington, and Williams,* xcii
See also Dermatitis
Papain: Activation, *Fruton and Bergmann,* 153
Dehydrogenases, action, *Bernheim,* 141
Paraldehyde: Biological fluids, determination, *Levine and Bodansky,* 193
Parathyroid: Reproduction influence, *Bodansky and Duff,* xiv
Pasteur enzyme: Retina, *Stern, Melnick, and DuBois,* xcix
Peptidase(s): Di-, activation, *Berger and Johnson,* 639
Leucyl-, occurrence, *Berger and Johnson,* 157

Percorten: Muscle creatine and creatine-creatinine excretion, adrenalectomy, effect, *Koven, Pizzolato, and Beard,* lvi

Phenolphthalein: Conjugated, chemical constitution, *Di Somma,* 277

Phenylalanine: Metabolism, ascorbic acid relation, *Sealock, Perkinson, and Silberstein,* lxxxvii

Phenylhydrazine: Dehydrogenase action, *Bernheim,* 485

Phosphate(s): Metabolism, creatine-creatinine relation, *Beard, Espenan, Koven, and Pizzolato,* x

Radioactive, blood cell, red, permeability, *Eisenman, Ott, Smith, and Winkler,* xxviii

—, tooth enamel, exchange, *von Hevesy and Armstrong,* xliv

Phospholipid(s): Blood plasma, dietary fat effect, *Artom and Freeman,* iv

Liver, turnover, methionine, cystine, and cysteine influence, radioactive phosphorus as indicator, *Perlman, Stillman, and Chaikoff,* 651

Metabolism, radioactive phosphorus as indicator, *Jones, Chaikoff, and Lawrence,* 319

Perlman, Stillman, and Chaikoff, 651

Tumors, turnover, radioactive phosphorus as indicator, *Jones, Chaikoff, and Lawrence,* 319

Phosphorus: Dietary, hypervitaminosis D_2 and D_3, effect, *Morgan and Shimotori,* lxix

Fat metabolism, relation, *Reiser,* lxxx

Glucose metabolism, relation, *Reiser,* lxxx

Radioactive, carcinosarcoma lecithins and cephalins, turnover, indicator, *Haven,* xl

Phosphorus—*continued:*

Radioactive, liver phospholipid turnover indicator, methionine, cystine, and cysteine influence, *Perlman, Stillman, and Chaikoff,* 651

—, phospholipid metabolism indicator, *Jones, Chaikoff, and Lawrence,* 319

Perlman, Stillman, and Chaikoff, 651

—, tumor phospholipid turnover, indicator, *Jones, Chaikoff, and Lawrence,* 319

Photosynthesis: Chlorophyll relation, *Inman,* xlviii

Pituitary: Antagonist, chemistry, *Bischoff,* 621

Anterior, interstitial cell-stimulating and thyrotropic effects, relation, *Jensen and Tolksdorf,* xlix

Follicle-stimulating hormone, separation, *Greep, van Dyke, and Chow,* 289

Luteinizing hormone, separation, *Greep, van Dyke, and Chow,* 289

Pituitary extract(s): Anterior, diabetes, pancreatic, effect, *Gaebler and Galbraith,* xxxv

—, fractions, ketogenic and respiratory quotient-reducing substances, preparation and assay, *Greaves, Freiberg, and Johns,* 243

Blood serum gonadotropic activity, effect, *Wade and Katzman,* ciii

Placenta: Dihydrotheelin isolation, *Huffman, Thayer, and Doisy,* xlv

α-Dihydrotheelin isolation, *Huffman, Thayer, and Doisy,* 567

Pleural fluid: Hyaluronic acid, tumor relation, *Meyer and Chaffee,* 83

Pneumococcus: Metabolism, seasonal variation, *Friedemann*, xxxiv
Polysaccharide(s): Tuberculin protein, removal, *Seibert*, 593
Porphyrindin: Myosin, sulfhydryl groups, determination, use, *Greenstein and Edsall*, 397
Reducing groups, determination, use, *Brand and Kassell*, 437
Potassium: Muscle, frog, *Steinbach*, 695
Radioactive, blood cell, red, permeability, *Eisenman, Ott, Smith, and Winkler*, xxviii
Potassium salt(s): Muscle, skeletal, water, injection effect, *Eichelberger*, xxviii
Pregnancy: Urine gonadotropic hormone, *Gurin, Bachman, and Wilson*, 467, 477
— — — chemistry, *Gurin, Bachman, and Wilson*, 467
— — — purity, *Gurin, Bachman, and Wilson*, 477
Pregnanediol: Urine, assay, *Marker and Hartman*, 529
Pressor substance: *See also* Angiotonin
Progesterone: 6(α)-Hydroxy-, *Ehrenstein and Stevens*, xxvii
Progestin: Estrogenic substances and, sexual receptivity, effect, *Leighty, Wick, and Jeffries*, lix
Protein(s): Blood serum, amino acids, basic, *Block*, 71
— —, analysis, *Murrill, Block, and Newburgh*, 521
— —, arginine ingestion effect, *Block*, 71
— —, determination, biuret reaction use, *Robinson and Hogden*, lxxxi
— —, quartz and collodion particles, electric mobilities, film formation, relation, *Moyer and Gorin*, 605
Protein(s)—*continued:*
Crystalline, urine, normal, *Hanke*, xl
Denaturation, Roentgen ray analysis, *Spiegel-Adolf and Henny*, xciv
Dietary levels, effect, *McCoy*, lxiv
Nucleo-. *See* Nucleoprotein
Tuberculin, nucleic acid and polysaccharide removal, *Seibert*, 593
—, Roentgen ray analysis, *Spiegel-Adolf, Seibert, and Henny*, xcv
Urine, analysis, *Murrill, Block, and Newburgh*, 521
Wool, acids and ions, combination modes, *Steinhardt and Harris*, xcvii
Proteolysis: Enzyme, tumor and normal tissue, *Fruton*, xxxiv
Purine(s): Muscle, heart and voluntary, *Mangun and Myers*, lxii
Pyridine: Amino acid acylation, use, *Carter, Handler, and Stevens*, xviii
Pyruvate: Blood, determination, acetoacetate presence, *Klein*, liii
—, stabilization and determination, *Bueding and Wortis*, xviii
Pyruvic acid: Blood, stabilization and determination, *Bueding and Wortis*, 585

Q

Quartz: Particles, blood serum proteins, electric mobilities, film formation, relation, *Moyer and Gorin*, 605
Quinine: Determination, micro-, nephelometric, *Kyker, Webb, and Andrews*, lvii
Optical activity, *Andrews and Webb*, iii

Quinine salt(s): Optical activity, *Andrews and Webb,* iii

R

Reducing group(s): Egg albumin, determination, porphyrindin use, *Brand and Kassell,* 437
Reproduction: Parathyroid influence, *Bodansky and Duff,* xiv
Respiration: Nicotinamide, stimulation action, *Saunders, Dorfman, and Koser,* lxxxiv
Respiratory quotient: -Reducing substances, pituitary, anterior, fractions, preparation and assay, *Greaves, Freiberg, and Johns,* 243
Retina: Pasteur enzyme, *Stern, Melnick, and DuBois,* xcix
Riboflavin: Determination, biological, micro-, *Feeney and Strong,* xxxi
See also Vitamin B_2
Roentgen ray: Protein denaturation, *Spiegel-Adolf and Henny,* xciv
Tuberculin proteins, analysis, *Spiegel-Adolf, Seibert, and Henny,* xcv

S

Salt(s): Catalysis, carbohydrate oxidation, *Everett and Sheppard,* xxix
—, — —, hydrogen ion concentration relation, *Sheppard, Danielson, and Everett,* lxxxviii
Creatine-creatinine relation, *Beard, Espenan, Koven, and Pizzolato,* x
Sodium thymonucleate, effect, *Greenstein,* xxxviii
Sarcoma: Walker, cortin, supracorsin, and adrenal hydrolysate effect, *Beard,* viii
See also Carcinosarcoma
Sarcosine: Creatinine-creatine excretion, ingestion and injection effect, *Beard,* vii
Schizophrenia: Blood serum lipids, testosterone effect, *Randall,* 137
Selenium compound(s): Volatile, excretion, sodium selenite administration effect, *Schultz and Lewis,* 199
Serine: *dl-*, betaine hydrochloride, lipotropic activity, synthesis and determination, *Carter and Melville,* 109
Sex: Hormones, creatine-creatinine metabolism, relation, *Beard and Jacob,* x, xi
Sodium: -Deficient diet, mineral metabolism, effect, *Orent-Keiles and McCollum,* 75
Muscle, frog, *Steinbach,* 695
Radioactive, blood cell, red, permeability, *Eisenman, Ott, Smith, and Winkler,* xxviii
Sodium chloride: Muscle creatine and creatine-creatinine excretion, adrenalectomy, effect, *Koven, Pizzolato, and Beard,* lvi
Sodium selenite: Selenium compounds, volatile, excretion, administration effect, *Schultz and Lewis,* 199
Sodium thymonucleate: Salt effect, *Greenstein,* xxxviii
Sphingomyelin: Chemical constitution, *Thannhauser and Reichel,* cii
Spinal cord: Thiamine effect, *Brower and Tashiro,* xvii
Spirographis: Hemin, oxidation-reduction potentials, *Barron,* 51
Hemochromogens, oxidation-reduction potentials, *Barron,* 51
Stearic acid: Formation rate, body, *Bernhard and Schoenheimer,* 713

Stearic acid—*continued:*
Palmitic acid conversion, *Stetten and Schoenheimer,* 329
Steroid(s): Ketones, adrenals, *Pfiffner and North,* lxxvii
Urine, assay, *Marker and Hartman,* 529
—, extraction apparatus, *Hershberg and Wolfe,* 667
Stomach: Emptying, glucose solutions, absorption, intestine, relation, *Fenton and Pierce,* xxxi
Function, nutrition relation, *Roe, Hall, and Dyer,* lxxxii
—, vitamin C deficiency relation, *Roe, Hall, and Dyer,* lxxxii
Gastric juice excretion, hydrazine alkalosis effect, *Hendrix, Calvin, and Greenberg,* xlii
Strontium: Uterus effect, *Cole and Harned,* xxi
Sulfapyridine: Fastness, *Schmidt and Dettwiler,* lxxxv
Sulfate(s): Excretion, *Power, Goudsmit, and Keith,* lxxvii
Inorganic, blood serum, determination, *Reinhold and Letonoff,* lxxix
Sulfhydryl group(s): Myosin, determination, porphyrindin titration, *Greenstein and Edsall,* 397
Nucleoprotein, liver, *Greenstein,* xxxix
Sulfinic acid: Cysteine relation, *Kassell,* p. l
Sulfone(s): Cystine enzyme oxidation relation, *Medes,* lxvi
Sulfonic acid: Cysteine relation, *Kassell,* p. l
Sulfonium reaction(s): Methionine, *Toennies,* cii
Sulfur: Metabolism, titanium effect, *Bernheim,* xi
Non-protein, blood serum, fractionation, *Letonoff and Reinhold,* lix
Sulfur compound(s): Nitrous acid, reaction, *Lavine and Whiteley,* lviii
Supracorsin: Sarcoma, Walker, effect, *Beard,* viii
Synovial fluid: Mucin, bacterial enzyme hydrolyzing, *Robertson, Ropes, and Bauer,* 261

T

Testosterone: Androsterone relation, *Dorfman and Hamilton,* 753, xxvi
Blood serum lipids, schizophrenia, effect, *Randall,* 137
Tetany: Development, *Greenberg, Boelter, and Knopf,* xxxviii
Theelin: Dihydro-, placenta, isolation, *Huffman, Thayer, and Doisy,* xlv
α-Dihydro-, placenta, isolation, *Huffman, Thayer, and Doisy,* 567
Thiamine: Determination, chemical, *Emmett, Peacock, and Brown,* xxix
Digestive secretions, phosphorylation and stability, *Melnick, Robinson, and Field,* lxvii
Pancreas lipase, effect, *Brower and Tashiro,* xvii
Spinal cord, effect, *Brower and Tashiro,* xvii
Threonine: Determination, micro-, *Block, Bolling, and Webb,* xiv
dl-, betaine hydrochloride, lipotropic activity, synthesis and determination, *Carter and Melville,* 109
dl-Allo-, betaine hydrochloride, lipotropic activity, synthesis and determination, *Carter and Melville,* 109
Thrombin: Preparation, *Astrup and Darling,* 761

Thyroid: Blood plasma and blood cells, red, cholesterol, activity relation, *Hughes*, xlvi
— serum magnesium partition, relation, *Soffer, Grossman, and Sobotka*, xcii
Hormone, tissues, *McClendon, Foster, and Kirkland*, lxiv
Thyrotropic hormone effect, *Logan, VanderLaan, and VanderLaan*, lxii
Thyrotropic hormone: Pituitary, anterior, interstitial cell-stimulating hormone, relation, *Jensen and Tolksdorf*, xlix
Thyroid gland composition and metabolism, effect, *Logan, VanderLaan, and VanderLaan*, lxii
Tissue(s): Cholesterol, dietary, effect, *Okey and Greaves*, lxxi
Ketone bodies, *Harrison and Long*, 209
Lipid metabolism, *Sperry and Waelsch*, xciv
Lipids, insulin hypoglycemia effect, *Randall*, 129
Respiration, malonate effect, *Baumann and Stare*, 183
Titanium: Sulfur metabolism, effect, *Bernheim*, xi
Tobacco: Mosaic virus, heat denaturation, *Lauffer and Price*, 1
Tooth: Enamel, radiophosphate exchange, *von Hevesy and Armstrong*, xliv
Trypsin: Dehydrogenases, action, *Bernheim*, 141
Tubercle bacillus: Avian, lipids, bound, *Anderson, Creighton, and Peck*, 675
Lipids, chemistry, *Anderson, Creighton, and Peck*, 675
Tuberculin: Protein, nucleic acid and polysaccharide removal, *Seibert*, 593
Tuberculin—*continued:*
Proteins, Roentgen ray analysis, *Spiegel-Adolf, Seibert, and Henny*, xcv
Tumors(s): Chemical treatment, *Shear and Turner*, lxxxvii
Enzymes, proteolytic, *Fruton*, xxxiv
Malignant, glutamic acid, *Graff, Rittenberg, and Foster*, 745
—, pleural fluid hyaluronic acid, relation, *Meyer and Chaffee*, 83
Methionine effect, *Morris and Voegtlin*, lxix
Phospholipid turnover, radioactive phosphorus as indicator, *Jones, Chaikoff, and Lawrence*, 319
See also Carcinosarcoma, Neoplasm, Sarcoma
Tursiops truncatus: *See* Dolphin
Tyrosine: Metabolism, ascorbic acid relation, *Sealock, Perkinson, and Silberstein*, lxxxvii

U

Urea: Creatine and glycocyamine synthesis, *Beard and Espenan*, ix
Glycine with, creatinine-creatine excretion, effect, *Beard*, vii
Sarcosine with, creatinine-creatine excretion, effect, *Beard*, vii
Urine: Androgenic substances, determination, colorimetric, *Baumann and Metzger*, vi
— —, extraction apparatus, *Neterval*, 313
— —, fractionation, *Baumann and Metzger*, vi
Cystine determination, *Brand, Cahill, and Kassell*, 431
Estrogenic substances, separation and determination, *Mather*, lxiii

Urine—*continued:*
Excretion, hydrazine alkalosis effect, *Hendrix, Calvin, and Greenberg,* xlii
Gonadotropin determination, normal, *Levin,* lx
Morphine excretion, *Oberst,* lxxi
Nicotinic acid and derivatives, determination, *Perlzweig, Levy, and Sarett,* lxxiv
Pregnancy, gonadotropic hormone, *Gurin, Bachman, and Wilson,* 467, 477
—, — — chemistry, *Gurin, Bachman, and Wilson,* 467
—, — — purity, *Gurin, Bachman, and Wilson,* 477
Pregnanediol, assay, *Marker and Hartman,* 529
Protein, crystalline, normal, *Hanke,* xl
Proteins, analysis, *Murrill, Block, and Newburgh,* 521
Steroids, assay, *Marker and Hartman,* 529
—, extraction apparatus, *Hershberg and Wolfe,* 667
Uronic acid(s): Keto-l-, preparation and carbohydrate oxidation, relation, *Crews, Sheppard, Sudduth, and Everett,* xxiii
Uterus: Strontium and calcium effect, *Cole and Harned,* xxi

V

Virus: Tobacco mosaic, heat denaturation, *Lauffer and Price,* 1
Vitamin(s): A, absorption, intestine, *Gray, Morgareidge, and Cawley,* xxxvii
—, dietary, hypervitaminosis D_2 and D_3, effect, *Morgan and Shimotori,* lxix
—, milk, determination, photoelectric, *Koehn,* lvi
B complex, synthesis, cow rumen, *McElroy and Goss,* lxv
Vitamin(s)—*continued:*
B_1. *See also* Thiamine
B_2 complex filtrate factor, nature, *Mohammad, Emerson, Emerson, and Evans,* 17
—. *See also* Riboflavin
B_6, fatty acids, unsaturated, nutritional relation, *Salmon,* lxxxiii
C, deficiency, gastric function relation, *Roe, Hall, and Dyer,* lxxxii
D, action, *Smith and Spector,* xc
E, oxidation, *Golumbic,* xxxvi
K, *Ansbacher,* iii
—, activity, 4-amino-2-methyl-1-naphthol and 4-amino-3-methyl-1-naphthol, *Emmett, Kamm, and Sharp,* 285
—, bile salt substitute for administration with, *Lozinski and Gottlieb,* 635
—, determination, *Quick,* lxxviii
K_2, chemical constitution, *Binkley, McKee, Thayer, and Doisy,* 721, xii
See also Hypervitaminosis

W

Water: Blood, dolphin, *Eichelberger, Fetcher, Geiling, and Vos,* 145
Creatine-creatinine relation, *Beard, Espenan, Koven, and Pizzolato,* x
Distribution, diabetes, *Sunderman and Dohan,* ci
Muscle, *Darrow, Yannet, and Miller,* xxiv
—, skeletal, dolphin, *Eichelberger, Geiling, and Vos,* 661
—, —, potassium salts injection effect, *Eichelberger,* xxviii
Wool: Powdered, chemistry, *Routh,* lxxxii

Wool—*continued:*
Protein, acids and ions, combination modes, *Steinhardt and Harris*, xcvii

X

X-ray: *See* Roentgen ray
Xylose: Blood sugar, effect, *Darby and Day*, 503

Y

Yeast: Extract, growth effect, *Jukes*, 631

Z

Zein: Hydrolysates, nutritive value, *Borchers and Berg*, xv